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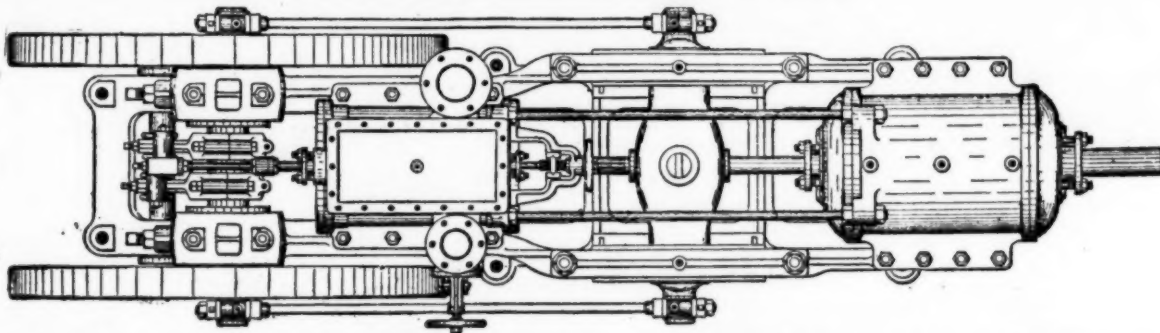
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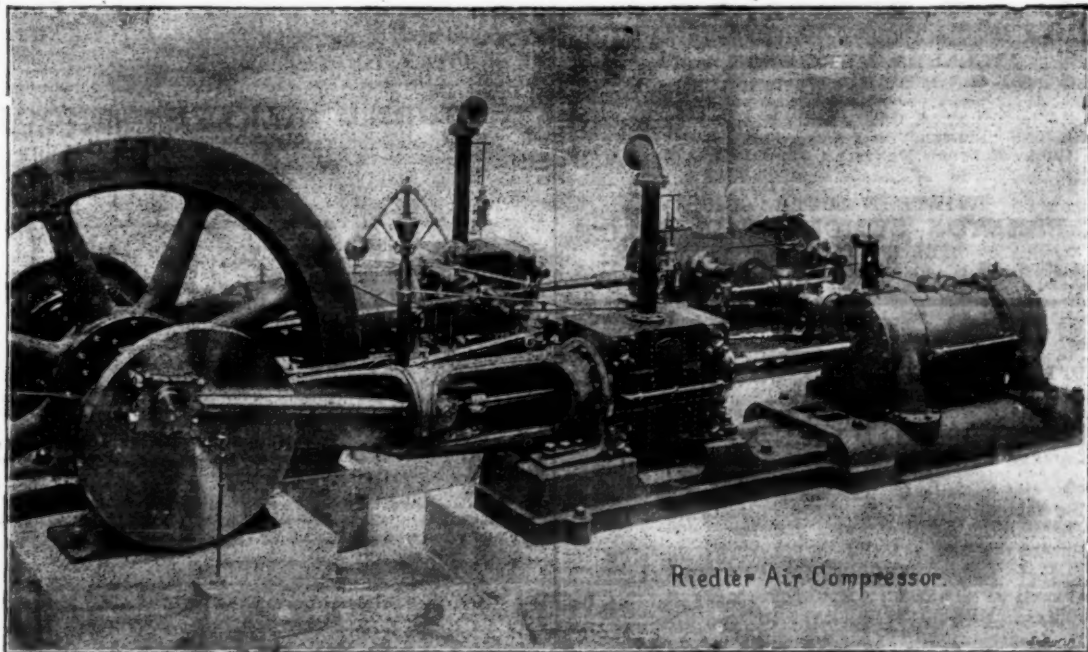
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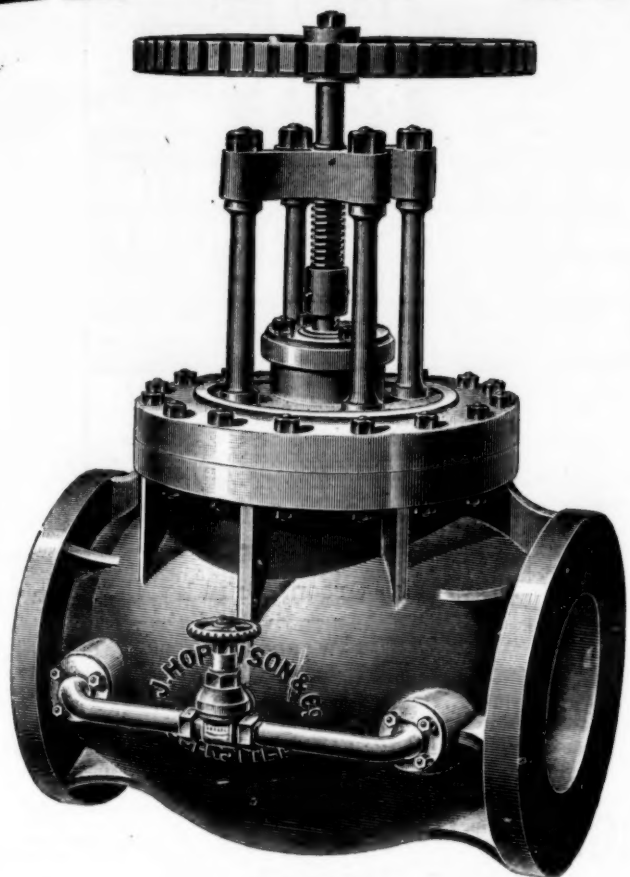


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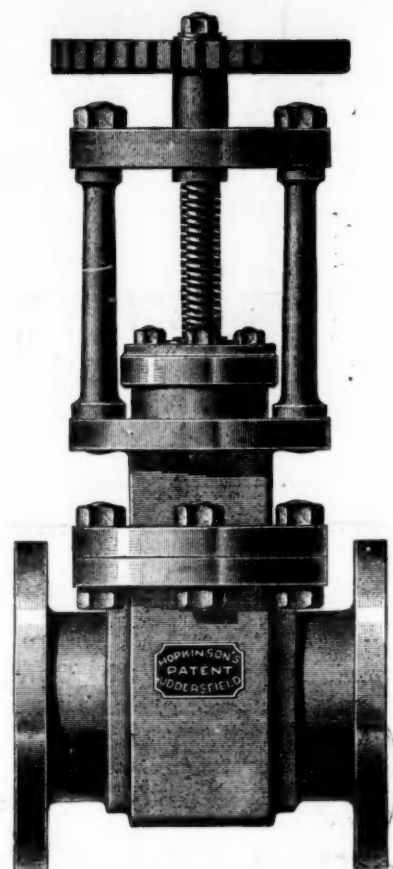


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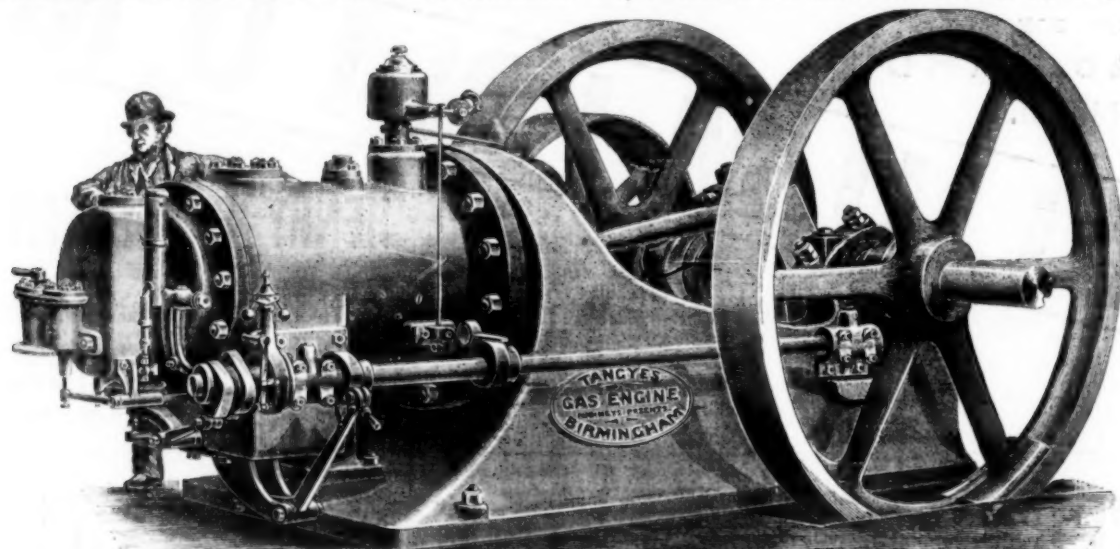
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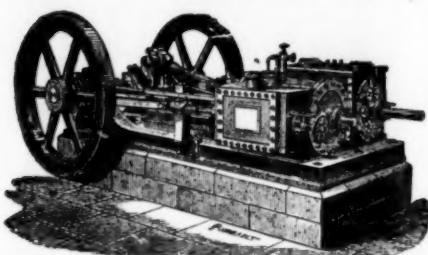
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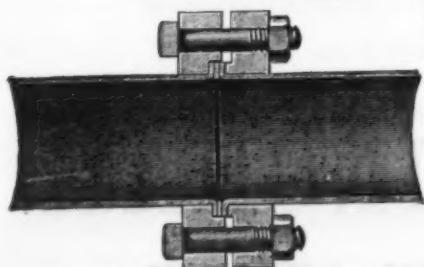
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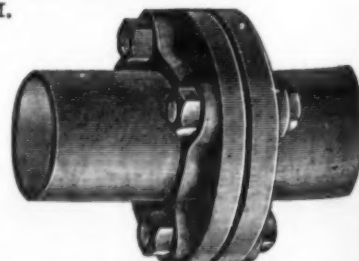
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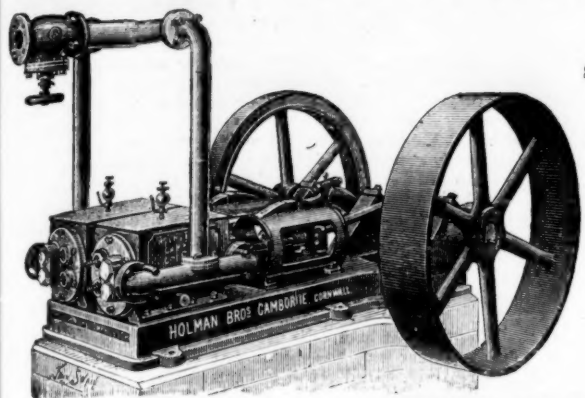
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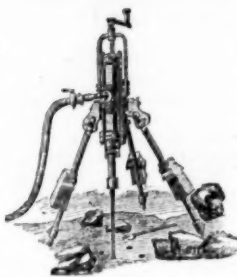
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RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour.

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE** **46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

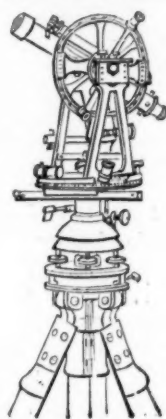
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London Offices: 7 and 9, LEADENHALL BUILDINGS, E.C.

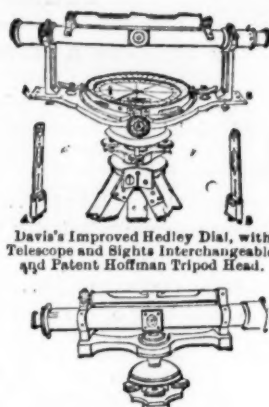
JOHN DAVIS AND SON,

ALL SAINTS WORKS, DERBY;

118, NEWGATE STREET, LONDON.



Transit Theodolite with Patent
Hoffman Tripod Head, and
Trough Compass.



Dumpy Level with
Hoffman Patent Tripod Head.

**MINING, SURVEYING, AND
ENGINEERING INSTRUMENTS.**
THEODOLITES. LEVELS. TACHEOMETERS.

**Davis's Improved Hedley Miners' Dials, with
HOFFMAN PATENT TRIPOD HEAD;
AND ALL DESCRIPTIONS OF MATHEMATICAL AND
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SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS.
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Gold Medal Awarded Mining Exhibition, 1890.
"THE ENGINEERING TELEGRAPH CODE USED."

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Concentrator (Limited).

In the **CLARKSON-STANFIELD** process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT 1/2 TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.

CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS

6, COLONIAL AVENUE, MINORIES, LONDON, E.

The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their **CLARKSON-STANFIELD** plant working on a Refractory Low Grade Gold Ore.

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- 12960 John Barker Smith, 23, Coleman Street, London.—Improvements in or connected with steam boilers.—July 22.
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JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

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New Transvaal Company (Limited).—Registered by Hollams, Sons, Coward, and Hawkesley, Mining Lane, E.C., with a capital of £100,000 in £1 shares (20 founders'). Object: To seek for and secure openings for the employment of capital in Africa or elsewhere, and, with a view thereto, to prospect, examine, explore, and test; and to dispatch and employ expeditions, commissioners, experts, and other agents.

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Kingsbridge Slate Quarries Company (Limited).—Registered by A. Appel, 94, Cannon-street, E.C., with a capital of £12,000 in £12 shares. Object: To enter into a certain agreement for the acquisition of the estate, right, title, and interest of V. Garland and others in the states, slate rock, slabs, and other stone in, under, or upon certain lands situate at South Molescombe, Devon, and to turn and work to account the same. The directors are to be nominated by the signatories. Qualification, £500. Remuneration, 50 guineas per annum each.

Bethanga Gold Fields (Limited).—Registered by Wainwright and Co., 9, 8, 10, 11, W.C., with a capital of £100,000 in £1 shares (50,000 preference). Object: To adopt and carry into effect an agreement, made July 19, between F. E. Harris of the one part and P. E. Pearson, on behalf of this company, of the other part, to acquire any gold mines, mining, water, and other rights, grants, leases, claims, concessions, options, auriferous lands, &c., in Victoria, Australia, or elsewhere; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all its branches.

Nigel Main Reef (Limited).—Registered by C. F. Smith, Savoy Mansions, Strand, W.C., with a capital of £120,000 in £1 shares. Object: To adopt and carry into effect an agreement expressed to be made between the Bristol Exploration Company (Limited) of the one part, and this company of the other part, and, generally, to seek for and secure openings for the employment of capital in Africa or elsewhere, and to acquire, develop, work, and turn to account any gold mine, mining rights, grants, leases, claims, concessions, options, metalliferous land, &c.

Transvaal Minerals Exploring Company (Limited).—Registered by the Transvaal Mineral Lands Development Company (Limited), 70 and 71, Bishopsgate Street Within, E.C., with a capital of £1000 in £1 shares. Object: To acquire the right of prospecting and purchasing lands in the South African Republic. Registered without Articles of Association.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

*We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Reservoir. August 23 (Wokingham).—For the construction of a reservoir in connection with works for the supply of water to the parishes of Wargrave and Telford, for the Wokingham Rural District Council. The works will comprise the building of a brick and concrete reservoir about 52 feet square inside. The plans may be seen and copies of the specification and bills of quantities obtained at the house of the surveyor, Mr. R. W. Hamilton, Glen-thorne, Hamilton Road, Reading.

Sinking Well. August 20 (Ware).—For sinking a well and borehole, providing and fixing a gas engine and pump, and laying a rising main, and other works in relation thereto, at Ware, for the Ware Urban District Council. Plans and specifications of the work and draft form of the contract can be seen at the offices of Messrs. Bailey Denton, Son, and North, Palace Chambers, Westminster.

Fencing. August 20 (Great Wyrley).—For supply of 1200 yards or thereabouts, of unclimbable iron fencing, 4 feet high, with one pair of folding gates, to be 15 feet wide when opened; and for a galvanised iron chipel, lined with wood, suitable for a cemetery, with reading desk and seating accommodation; the fencing and chapel to be erected on the burial ground, Panny Fields, Great Wyrley, when required, for the Great Wyrley Parish Council.

Coal. August 20 (Chorley).—For 12 months' supply of the following, for the Chorley Corporation:—(1) 8000 tons gas coal and nuts, (2) lime, (3) 8 tons vitriol. The supply to commence on September 1. Forms of tender for coal and vitriol, and any further information, may be had on application to Mr. R. Farnley, gas manager. Tenders, duly endorsed, to be sent to Mr. Jno. Mills town clerk, Town Hall, Chorley.

Electric Railways. November 14 (Vienna).—The Municipality of Vienna invite plans for the construction and working of a system of electric railways in city and suburbs of Vienna. All information respecting lines, levels, and plans at Town Hall, Vienna, where applications must be made for specifications and conditions of any contract for the work in question and other details; also for permission to inspect plans of the routes to be followed.

COAL AT DORTMUND.—During the quarter ending with June last only 9,571,298 tons of coal were extracted in the Dortmund mining district of Germany, this being a decrease of 48,489 tons, as compared with the corresponding period of last year. The production in this district during the first half of the year has only amounted to 19,624,195 tons, as against 19,709,242 tons in the first half of 1894.

THE AYRESHIRE COLLIERY DISASTER.—The Press Association Saltcoats correspondent telegraphed on Monday that the work of searching for the nine miners still remaining in Auchanharvie pit, was continued throughout the day, all the workings being searched by squads of men, but up to the time of telegraphing without result. The search parties are working incessantly in the hope of relieving the men. The five men rescued on Sunday are progressing favourably.

WALKERS' PATENT INDESTRUCTIBLE VENTILATING FANS FOR MINES, TUNNELS, &c.
 CONSTRUCTORS OF THE VENTILATING MACHINERY AT THE SEVERN AND MERSEY TUNNELS.

PATENT ANTI-VIBRATION SHUTTER
 Applicable to all enclosed fans

BROTHERS

Engineers, Pagefield Ironworks, WIGAN.

WALKER PATENT AIR COMPRESSING ENGINES
 GAS COMPRESSING ENGINES
 BESSEMER BLOWING ENGINES

upwards of 400 of the above now AT WORK indicating in the aggregate 150,000 Horse-Power

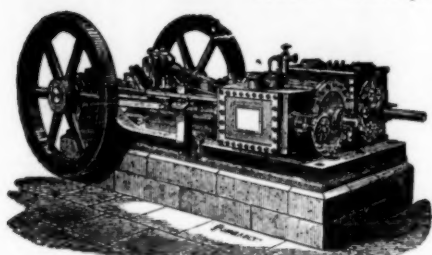
Fisher & Walkers' Patent Friction Clutch & Underground Haulage Machinery
 THIS GEARING IS NOW EXTENSIVELY IN USE FOR HAULAGE PURPOSES. *

The objects attained are SIMPLICITY, ENDURANCE OF THE MACHINERY AND ROPES with a MINIMUM EXPENDITURE OF POWER.

AIR COMPRESSORS

With Compound Air and Steam Cylinders,

Fitted with SCHRAM'S Inlet and Outlet Valves giving the greatest efficiency.



SCHRAM'S IMPROVED Rock Boring Machines.

Supplied to the Indian, Colonial, and other Governments.

2500 IN USE in all PARTS of the WORLD.

DIAMOND PROSPECTING DRILLS.

"OPTIMUS" COMPOUND ROCK DRILL.

(P. J. OGLE'S PATENT.)

Consumes 40 per cent. less Compressed Air than any other Drill at the same time giving the most effectual results.

ESTIMATES AND FULL PARTICULARS ON APPLICATION.

RICHARD SCHRAM & CO., 17a, Great George Street, Westminster, S.W.

TELEGRAMS: "SCHRAM, LONDON," A1, A.B.C. and The Engineering Telegraph Codes Used.

Telegrams—Green, Foundry, Aberystwyth.

SILVER MEDALS AWARDED AT THE ROYAL CORNWALL POLYTECHNIC, 1873 & 1876; GOLD MEDAL AWARDED AT THE GREAT INTERNATIONAL MINING EXHIBITION, CRYSTAL PALACE, 1890.

ONLY AWARDS GIVEN FOR CONCENTRATION PLANTS

GEORGE GREEN'S PATENT Self-Acting or Automatic Ore Dressing Machinery,

A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES—up to Five Tons may be treated, and the commercial value determined, in the way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.

GOLD STAMP AND OTHER MILLS.

GEORGE GREEN, THE FOUNDRY, ABERYSTWYTH.

For PURE ALUMINIUM

98 to 99½ per cent. (98 per cent. minimum guaranteed) in

INGOTS, STICKS, & ROLLING SLABS;

ALSO FOR

SHEETS, &c., AND FERRO-ALUMINIUM.

ALUMINIUM.

APPLY TO

HENRY R. MERTON & CO.,

2, Metal Exchange Buildings, Leadenhall Avenue.

LONDON, E.C.

A. & J. STEWART and CLYDESDALE, Limited.

Glasgow, Coatbridge, and Mossend.

WROUGHT IRON WELDED TUBES and FITTINGS for GAS, WATER, and STEAM.

Light Lap-welded Wrought-iron and Steel Tubes

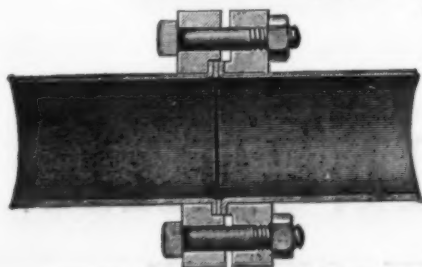
(SPECIALLY ADAPTED FOR MINES).

With Patent Flanged Joints (as illustrated) for the Conveyance of Water, Steam, and Air, at High and Low Pressures.

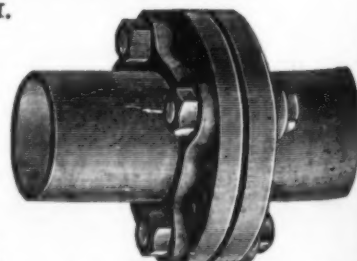
LAP-WELDED IRON AND STEEL BOILER TUBES

FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.

STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



SECTION OF PATENT FLANGED JOINT



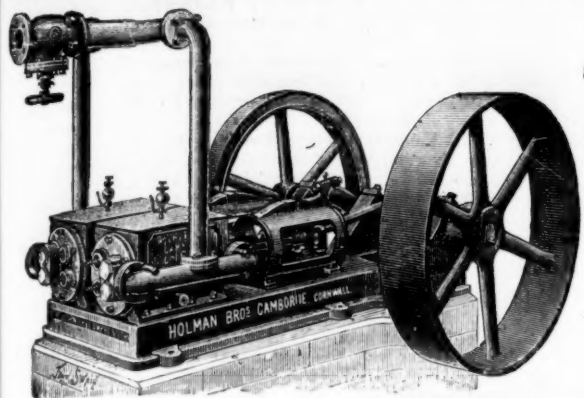
PLAN OF PATENT FLANGED JOINT.

Head Offices: **41, OSWALD STREET, GLASGOW.**

HOLMAN Bros., Camborne, Cornwall.

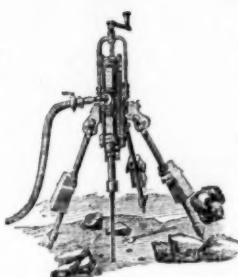
ESTABLISHED 1839.

Patentees and Sole Makers of
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FIRST
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Highest Award,
Mining Institute
Contest, 1881.

Three Makers
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FIRST
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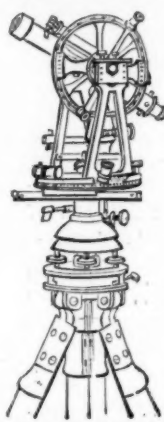
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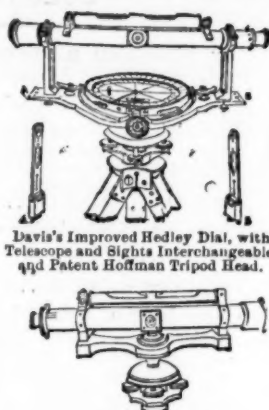
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Kingsbridge Slate Quarries Company (Limited).—Registered by A. Appel, 94, Cannon-street, E.C., with a capital of £10,000 in £10 shares. Object: To enter into a certain agreement for the acquisition of the estate, right, title, and interest of V. Garland and others in the slates, slate rock, slabs, and other stone in, under, or upon certain lands situate at South Molescombe, Devon, and to turn and work to account the same. The directors are to be nominated by the signatories. Qualification, £500. Remuneration, 50 guineas per annum each.

Bethanga Gold Fields (Limited).—Registered by Walwright and Co., 9, Staple Inn, W.C., with a capital of £300,000 in £1 shares (60,000 preference). Object: To adopt and carry into effect an agreement, made July 19, between F. E. Harris of the one part and P. E. Pearson, on behalf of this company, of the other part; to acquire any gold mine, mining, water, and all other rights, grants, leases, claims, concessions, options, auriferous lands, &c., in Victoria, Australia, or elsewhere; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all its branches.

Nigel Main Reef (Limited).—Registered by C. F. Smith, Savoy Mansions, Strand, W.C., with a capital of £120,000 in £1 shares. Object: To adopt and carry into effect an agreement expressed to be made between the Bristol Exploration Company (Limited) of the one part, and this company of the other part, and generally, to seek for and secure openings for the employment of capital in Africa or elsewhere, and to acquire, develop, work, and turn to account any gold mine, mining rights, grants, leases, claims, concessions, options, metalliciferous land, &c.

Rand Minerals Exploring Company (Limited).—Registered by the Transvaal Mineral Lands Development Company (Limited), 70 and 71, Bishopsgate Street Within, E.C., with a capital of £1000 in £1 shares. Object: To acquire the right of prospecting and purchasing lands in the South African Republic. Registered without Articles of Association.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

"We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given."

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Reservoir. August 23 (Wokingham).—For the construction of a reservoir in connection with works for the supply of water to the parishes of Wargrave and Teyford, for the Wokingham Rural District Council. The works will comprise the building of a brick and concrete reservoir about 52 feet square inside. The plans may be seen and copies of the specification and bills of quantities obtained at the house of the surveyor, Mr. R. W. Hamilton, Glen-thorne, Hamilton Road, Reading.

Sinking Well. August 20 (Ware).—For sinking a well and borehole, providing and fixing a gas engine and pump, and having a rising main, and other works in relation thereto, at Ware, for the Ware Urban District Council. Plans and specifications of the work and draft form of the contract can be seen at the offices of Messrs. Bailey Denton, Son, and North, Palace Chambers, Westminster.

Fencing. August 20 (Great Wyrley).—For supply of 1200 yards or thereabouts, of anticlimb iron fencing, 3 feet high, with one pair of folding gates, to be 15 feet wide when opened; and for a galvanised iron chapel, lined with wood, suitable for a cemetery, with reading desk and seating accommodation; the fencing and chapel to be erected on the burial ground, Panny Fields, Great Wyrley, when required, for the Great Wyrley Parish Council.

Coal. August 20 (Chorley).—For 12 months' supply of the following, for the Chorley Corporation:—(1) 8000 tons gas coal and nuts, (2) lime, (3) 5 tons vitriol. The supply to commence on September 1. Forms of tender for coal and vitriol, and any further information, may be had on application to Mr. R. Fearnley, gas manager. Tenders, duly endorsed, to be sent to Mr. Jno. Mills town clerk, Town Hall, Chorley.

Electric Railways. November 14 (Vienna).—The Municipality of Vienna invite plans for the construction and working of a system of electric railways in city and suburbs of Vienna. All information respecting lines, levels, and plans at Town Hall, Vienna, where applications must be made for specifications and conditions of any contract for the work in question and other details; also for permission to inspect plans of the routes to be followed.

COAL AT DORTMUND.—During the quarter ending with June last only 9,571,298 tons of coal were extracted in the Dortmund mining district of Germany, this being a decrease of 48,489 tons, as compared with the corresponding period of last year. The production in this district during the first half of the year has only amounted to 19,624,195 tons, as against 19,709,242 tons in the first half of 1894.

THE AYREHIRE COLLIERY DISASTER.—The Press Association Saltcoats correspondent telegraphed on Monday that the work of searching for the nine miners still remaining in Auchenharvie pit, was continued throughout the day, all the workings being searched by squads of men, but up to the time of telegraphing without result. The search parties are working incessantly in the hope of relieving the men. The five men rescued on Sunday are progressing favourably.

THE LIXIVIATION OF SILVER ORES BY THE RUSSELL PROCESS AT ASPEN, COLORADO.

By WILLARD S. MORSE, Prescott, Arizona.

(Concluded from Page 923)

AFTER lying on the cooling-floor for an average of 102 hours, the ore showed the following results:—

Ounces silver per ton.	Solubility. Per cent.	Chlorination. Per cent.	Extraction. Per cent.
24-6289	14-0830	78-9882	89-7857

Difference in results by laying on the cooling-floor:—

	Per cent.
Gain in chlorination	26-4180
Gain in extraction	11-3499

Leaching of Ore and Extraction in Mill.

The weight of the roasted ore treated was 31,775-331 tons, which was leached in 546 charges, averaging 58-19 tons. Each charge required about 22-5 cubic feet of water, or about 60 inches in depth in the tank, to completely saturate it. After washing and removing soluble salts, about 50 inches of solution will saturate the charge.

The following method of leaching was followed, as a rule:—

1. The ore was charged into one volume of water, followed by a second volume of wash water, and by;
2. Three volumes of warm ordinary solution (about 1-8 per cent. of hyposulphite);
3. One volume of extra solution (average about 0-5 per cent. of CuSO_4);
4. One volume of warm ordinary solution;
5. One volume of extra solution;
6. Two volumes of warm ordinary solution, and
7. The last wash-water, the dividing line between solution and wash water being drawn when about $1\frac{1}{2}$ volume of wash water had been applied.

This treatment was varied as to quantity of solution applied, and strength of extra solution, but the above is about an average. The average time of leaching each charge was about 100 hours. This includes stops of every kind.

The average leaching rate was 13 inches per hour. This was the natural leaching rate; but, as a rule, in leaching after the ore had been washed, the leaching rate was cut down to 10 inches per hour.

The following method of sampling the ore in the vats was used for all samples except the final tailings sample. A brass tube with a valve in the bottom was used, and three to five cores $\frac{1}{4}$ inch in diameter for the entire depth of the charge were secured. For the final tailings sample the following method was used: after one-half of the charge had been sluiced, and a face of tailings about 7 feet high and 17 feet across thus secured, three samples were taken as follows:—Top sample, taken about 1 foot from surface of ore and across entire face; bottom sample, taken in the same way about 1 foot from the bottom of the vat; and general sample, taken over the entire face and representing a general average of the tailings.

In addition to the intermediate samples, the following samples were always taken: washed ore sample, taken after washing ore with water, on which chlorination and extraction tests were made, as well as assay; first ordinary sample, taken after the ore had been leached with ordinary solution, and on which the extraction in mill by hyposulphite is calculated; preliminary sample, taken before sluicing the tailings; and the top, bottom, and general tailings samples, already described.

On the general tailings samples the contents of the tailings are calculated.

The average of these samples for the run are as follows:—

	Ounces Silver per ton.
Washed ore samples,	24-4905
First Ordinary,	11-8174
Preliminary tailings,	3-44
Top tailings,	4-04
Bottom tailings,	4-86
General tailings,	4-7984

The following are the assays and laboratory determinations made on samples, and the calculations based thereon:—

Charge samples taken .. Silver per ton .. 24-6289 ounces.

Soluble salts .. 14-083 per cent.

Calculated value (after deducting soluble salts) .. 28-6648 ounces.

Chlorination .. 78-9882 per cent.

Extraction .. 89-7857 per cent.

Washed ore samples .. Silver per ton .. 24-4905 ounces.

Showing an extraction of silver in roasted ore by washing with water of 14-5616 per cent.

Chlorination .. 64-3261 per cent.

Extraction .. 88-5743 per cent.

First ordinary .. Silver per ton .. 11-8174 ounces.

Showing an extraction of silver in roasted ore by leaching with hyposulphite of soda of 58-7738 per cent.

Final tailings .. Silver per ton .. 3-7984 ounces.

Showing an extraction of silver in roasted ore by all treatment of 86-7485 per cent.

CALCULATION OF SILVER IN TAILINGS.

Weight of roasted ore ..	31,775-338 tons
Soluble salts ..	14-083 per cent.
Weight of tailings ..	27,300-410 tons
Average assay of tailings ..	3-7984 ounces
Contents of tailings ..	103,702-36 ounces of silver.

From the above, the following calculations are made:—

Decrease in laboratory results by washing:—	
Chlorination ..	14-6021 per cent.
Extraction ..	1-2114 "

RESULTS IN LABORATORY COMPARED WITH RESULTS IN MILL.

	Per cent.	Per cent.
Laboratory results on charge samples .. Chlorination, 78-9282		Extraction, 89-7857
Laboratory results on washed ore samples ..	64-3261	88-5743
Mill results: Extracted by hyposulphite of soda ..	58-7733	By extra, 86-7485

MILL RESULTS BEHIND LABORATORY RESULTS.

	Per cent.	Per cent.
Based on charge samples .. Chlorination, 20-1544		Extraction, 3-0372
Based on washed ore samples ..	5-5523	1-8258

I will not undertake here to discuss the causes for the decrease in chlorination, or the changing of the silver chloride ore in roasted ore, to some other form which is not soluble in a solution of hyposulphite of soda, by the washing with water. A vast amount of experimenting was done during the year, and the conclusions arrived at may form the subject of another paper.

Product.

Silver was precipitated from solutions with sodium sulphide; part of the time with a polysulphide, Na_2S_2 , made from caustic soda and sulphur; and part of the time with a monosulphide, Na_2S , imported from Germany in the form of crystals. The total of sulphides produced was 442,576 lbs., divided as follows:—

	Pounds.	Ounces per ton.	Ounces of silver.
Solution sulphides ..	313,417	Assaying 3790	Containing 593,069-12
Wash-water sulphides ..	95,442	"	2875
Dead carbonates ..	33,717	"	432

Total contents of product .. 737,303-62

DIFFERENCE BETWEEN "APPARENT" AND "ACTUAL EXTRACTION."

In noting the difference between the "apparent extraction" (i.e., the extraction determined by calculating contents of tailings as against contents of roasted ore), and the "actual extraction" (i.e., that determined by calculating contents of product as against contents of roasted ore) attention is called to the fact that the contents of sulphides are based on "corrected assays," that is to say, the silver-contents of scorification slag and cupel are added to the original assay. This addition which was found, on this grade of sulphides, to amount to about 2 per cent. The ore contents are figured on the commercial assay by scorification, in which no account is made of silver contained in slag and cupel, the amount of which was found to be, on this ore, from 4 to 5 per cent.

APPARENT EXTRACTION.

	Ounces of silver.
Contents of roasted ore ..	782,586-09
Contents of tailings ..	103,702-36
Calculated contents of sulphides ..	678,883-73

On this calculation the apparent extraction of 86-74 per cent. of the silver in roasted ore is based.

Actual contents of sulphides by corrected assay .. 737,303-62

On this calculation the actual extraction of 94-21 per cent. of the silver in roasted ore is based.

Differences between calculated and actual contents of sulphides = 6-78 per cent. or, 58,419-89

ACTUAL EXTRACTION.

Contents of raw ore ..	861,488-05
Contents of roasted ore ..	782,586-09
Loss in roasting and dust loss (9-157 per cent.) ..	78,901-96
Contents of product ..	737,303-62
Or 94-21 + per cent. of the silver in roasted ore and 85-58 + per cent. of the silver in raw ore.	

CONSUMPTION AND COST OF SALT, COAL, AND CHEMICALS PER TON OF ORE TREATED.

	Used per ton of ore. Pounds.	Cost per ton of ore.
Salt ..	244-48	\$0-8719
Coal for drying ore and salt ..	85-77	1-322
Coal for roasting ore ..	117-44	1-819
Bluestone ..	13-45	6-331
Hypsulphite of soda ..	9-98	3-742
Chemicals for precipitating silver, including caustic soda, sulphur, and sodium sulphide ..	18-86	6-835

Discussion.

Mr. C. A. STETEFELDT, Oakland, Cal.: It has always been assumed by the writer, and also by others, that the silver volatilised by roasting in a Stetefeldt furnace was a minimum as compared with roasting in other furnaces. Now, Mr. Morse records at Aspen a loss of 9 and even over 10 per cent. Without doubting in the least the accuracy of Mr. Morse's statistics, I wish to say that it is not safe to draw general conclusions from a limited experience.

Unfortunately, I have no array of statistical figures at my disposal to combat Mr. Morse's statement, if he means to apply it to the Stetefeldt furnace at large, but must confine myself to general arguments.

In the first place, where ores are mined and reduced by the same company, accurate statistics in regard to the dry weights of the raw and roasted ore are not kept. This, for example, is the case at the Ontario and Marsac mills, Park City, Utah. In *Trans.*, xiv., 341, I have recorded experiments establishing the comparative loss of silver in roasting Ontario ore in the Howell and Stetefeldt furnaces. In one of these experiments the loss of silver was 13-5 per cent. greater in the Howell than in the Stetefeldt furnace. Now, if the Stetefeldt furnace had lost 10 per cent. silver, the loss in the Howell furnace would have been 23-5 per cent., which is not probable. In following the argument in my paper quoted above, it will be seen that the loss in roasting can be determined approximately by an indirect method. In the chloridising roasting of base ores a considerable change in weight takes place—i.e., the roasted ore, minus soluble salts, weighs considerably less than the raw ore before roasting. In comparing the value of the raw ore with the calculated value of the roasted ore minus soluble salts, the latter value should be greater in proportion to the change in weight, provided silver has not been lost. This change in weight can be determined by roasting average samples of ore in the muffle. From numerous determinations made in this way, it appeared that the loss of silver by roasting Ontario ore in the Stetefeldt furnace would not exceed from 2 to 3 per cent.

Several mills using the Stetefeldt furnace have done custom work—namely, the Reno mill and the Manhattan mill in Nevada, and the Lexington mill in Montana. Although I have no statistics from these mills at my disposal to prove my case, the following general argument will, nevertheless, have some weight.

The Reno mill did custom work exclusively, the Nevada Land and Mining Company having no mines of its own, and the business was very profitable while the supply of ore lasted. No complaint ever reached me as to the extravagant loss of silver in roasting. Mr. Ottokar Hofmann was employed there for some time, and, since he never was an enthusiastic admirer of the Stetefeldt furnace, he would surely have published facts detrimental to its reputation if results had warranted him in so doing. The Manhattan mill, Austin, Nevada, did custom work most of the time, and sometimes exclusively. After the introduction of the Stetefeldt furnace, this mill not only found

a great saving in the cost of roasting, but also a higher percentage of extraction as compared with roasting in reverberatory furnaces. Having bought the exclusive right to use the Stetefeldt furnace in the Reese river district, they reduced their working charges, and soon monopolised the buying of ore. Later on, an opposition mill was again started with a Howell furnace. It had to shut down on account of inferior extraction—i.e., as shown by Ontario experiments, great loss of silver in roasting. I have no Manhattan mill statistics to show; but would the Manhattan Company have paid a royalty on every ton of ore put through the Stetefeldt furnace, for 15 years, if it had lost 10 per cent. of silver in roasting?

The Lexington mill at Butte, Montana, has often been running exclusively on purchased ores, and, as I understand, with profit. Mr. Rueger, the general manager of the company, a graduate of Freiberg, and an able metallurgist (but not a member of the Institute), has never complained to me about losing money in consequence of having Stetefeldt furnaces at his mill. At the time I made the comparative test between roasting in Howell and Stetefeldt furnaces at the Ontario mill, I applied to Mr. Rueger for statistics on the loss of silver in roasting at his mill, but he did not see fit to grant my request.

In conclusion, I offer some explanations of the large loss of silver by roasting in the Stetefeldt furnace, at Aspen, as reported by Mr. Morse.

In the first place, the quantity of ore roasted per day (from 90 to 92 tons) was unusually large; and considering that 8 per cent. of sulphur in sulphurets had to be oxidised, it follows that strong draught had to be used. No long flue connects the last dust chamber with the chimney at Aspen, as is the case at the Ontario mill. Under the circumstances, it is my opinion that a more extensive system of dust chambers would have collected a large portion of the dust and fumes passing out of the chimney.

In the second place, the character of the Aspen ore is highly abnormal, on account of the high percentage of lime and magnesia it contains. Investigations at Aspen have shown, according to Mr. Morse, that the percentage of lime and magnesia in the roasted ore is largely reduced, and it must be assumed that these metals are volatilised as chlorides, their oxides not being volatile at high heat. It seems to me highly probable that these chlorides carried silver with them and thus caused, in part, the abnormal loss at Aspen.

Mr. Morse: Replying to Mr. Stetefeldt's remarks on the loss of silver in roasting Aspen ores with a Stetefeldt furnace, as recorded in my paper, I would say that it was not my intention to attack the Stetefeldt furnace, but simply to report the actual results obtained at Aspen.

It is unfortunate that so little reliable information has been published on this very important operation in the treatment of silver ores either for amalgamation or for lixiviation; and it was this lack of published data that prompted the writer to give the Aspen results, in the hope that a discussion would follow, which would bring forth the experience of others. Mr. Stetefeldt's "general argument," however, does not fill the bill. His experiments, as recorded in *Trans.*, xiv., 341, showing the comparative losses in roasting in Howell and Stetefeldt furnaces, offer a very roundabout way of attacking a very simple problem; and he does not arrive at the all-important fact of what the loss actually was with either furnace. The fact that Mr. Hofmann did not publish facts detrimental to the Stetefeldt furnace, does not show that the loss of silver in roasting in Stetefeldt furnaces is not large.

I sincerely hope that others having reliable statistics on the subject will publish them.

The results at Aspen, as published, are made up from records very carefully kept, and the calculations are based on the average of thousands of samples and assays; so that an error in a few samples or assays would not affect the general result, and it will require more than "general argument" to convince me that I am in error.

The results of a series of experiments conducted by Mr. E. B. Kirby in the chloridising roasting of Aspen ores, in a reverberatory furnace, will be of interest in connection with this discussion.

The ores were practically the same as those treated at Aspen, and the average of lime (CaO) was 12-3 per cent., the highest being 25-5 per cent. Eighteen lots of about 1 ton each were roasting in a reverberatory furnace, with salt, for a sufficient time to give fully as high "chlorination tests" as the ore roasted in a Stetefeldt furnace. Each lot was weighed, sampled, and assayed before and after roasting, and the average loss in roasting, including the dust loss, was found to be 6-64 per cent.

Mr. Stetefeldt's opinion that part of the silver loss is caused by the volatilisation of lime and magnesia may be correct, although this did not seem to be the case in Mr. Kirby's experiments in roasting in a reverberatory furnace, where the silver loss on the ores carrying 25-5 per cent. of lime was only 5-7 per cent.

It is undoubtedly true, however, that lime and magnesia are volatilised in the chloridising roasting of ores. A series of experiments made by Mr. J. Dawson Hawkins, at Aspen, in which four lots of ore were roasted with about 12 per cent. of salt, each lot was weighed and sampled, and lime and magnesia determinations made before and after roasting, showed a loss of 22-6 per cent. of the lime and 48-3 per cent. of the magnesia during the operation of roasting.

RAINFALL RETURN FOR COOLGARDIE.—The following is the record of the rainfall at Coolgardie from January 1 to June 25, 1895:—

	Jan.	Feb.	Mar.	Apr.	May	June
January 7 ..	7-78					
" 23 ..	4-2					
February 15 ..	2-6					
" 28 ..	0-3					
March 2 ..	0-5					
" 12 ..	1-1					
April 2 ..	2-8					
" 13 ..	1-5					
" 27 ..	2-1					
May 5 ..		1-0				
" 6 ..		1-75				
June 13 ..		1-2				
" 17 ..		0-8				
" 18 ..		2-1				
" 21 ..		1-4				
" 24 ..		4-0				
" 25 ..		4-1				

Total, 5 inches 10 points.

Number of days on which rain fell, 17.

INGOT-CASTING.—A new method of casting compound ingots for armour and other plates has been invented by Mr. T. Hampson, Millhouses, near Sheffield. The walls of the mould are smeared by a cover which is provided with two funnel-shaped orifices for the admission of the metal. One of these orifices communicates directly with the interior of the mould, but the other communicates with a series of channels provided with spraying nozzles. The first layer of metal is run directly into the mould through the first orifice, and the second or other layers are distributed evenly over the first by means of the channels and spraying nozzles.

IRON PRODUCTION IN JAPAN.—The production of iron in Japan for the year 1892—the latest returns published—is estimated at about 19,500 tons, about one-sixth of which is from the Government mines, the rest from private mines. The Kamafuji pig-iron for castings is good, but is too hard for purposes where machining is necessary, unless mixed freely with soft imported iron. The charcoal iron made in Yamaguchi is of excellent quality, but dear. No machine-rolled iron is yet made in Japan.

VENTERSKROON GOLD FIELD.

ARTICLE No. II.

[From the Johannesburg Star.]

Concluded from page 914.

THE Oden reef series—the lowest in the order of succession given in the first article—may be said to comprise three reefs. The first, on the hanging-wall side—these are sections taken on the farm Rooderand—has an average thickness of 4 or 5 feet, including a pyritic bar upon the footwall. This footwall is succeeded by another banked bed about 2½ feet wide, which has a leader close upon its own footwall of from 2 to 6 inches in thickness. This leader is sometimes only separable with difficulty from the sandstone upon which it lies. These three beds could be mined together, the total thickness being not less than about 3½ feet. Samples taken from various points, some panned and others assayed, show that the plate average should be something like 7 or 8 dwts. over a large extent of reef. Several years ago a company, known as the Vaal River Gold Mining Company, worked a block called the Jumbo block, on this line of reef. A 10 stamp battery was erected, but, as a well-known mining engineer has said, "Had the reef yielded an ounce per ton, it could not possibly have been made a payable concern with the system it was worked under in those days." It was shut down in due course. This block is on the boundary of the farms Nooitgedacht and Rooderand. Samples taken right across the reef have gone from 3 dwts. to 4 ounces. A few hundred feet to the north is another reef known as the Red reef, and assays taken lately have shown a lot of 9 dwts. stuff. A rich strike has been made recently on this line at Schoeman's. Pannings taken from the Oden reef series, behind the church at Venterkroon, seem to confirm the results above mentioned. The series look so promising at the various points on which it has been opened that it is a pity more work has not been done upon it. In addition to the Jumbo business, there was also some work done a few years ago on the same line on the Oden block. The system of work was very similar to that followed on the Jumbo property, and, as a matter of course, the end of the venture was practically the same. The next reef in order is the Roos reef. It lies about 1600 yards to the north or to the dip of the Oden series. It is a well-defined body of banket, varying in width from 2 to 5 feet, and is a likely-looking body of stuff, panning up to 8 dwts. in some places, and up to 15 in others, notably on Kodoesfontein and Buffelskloof. Practically nothing has been done upon it, although good shows are obtainable right along the line. It appears a good medium grade proposition. Further to the north occurs the well-known Amazon series. It comprises numerous banket beds and leaders, and is, at present, considered

The Most Important Series

in the district. Over a distance of 150 yards, in one place as many as 12 distinct reefs and leaders may be counted; the total number in the series, however, is very much greater than that. It will be remembered that at the last meeting of the Amazon Company, in Johannesburg, an emphatic protest was made against the procedure of a gentleman who was sent by the directors to report upon that property, and who took the average value of all the reefs and leaders he could find to represent the economic value of the milling ore upon the block. It was certainly a novel method of assessment. As a matter of fact, no one in the full possession of his wits, would propose to mill the whole formation, or even several hundred yards of it, although for theoretical purposes such a man might very properly be reckoned upon—perhaps. The reefs and leaders vary from a few inches to 20 feet and more in thickness. There are one or two reefs—notably the Amazon and Great Western reefs, on this series, which have each a thickness of 3 feet and upwards, and which seem to be the main gold bearers of the section. Considerable attention has been bestowed upon the line, and it is generally admitted to be a 6 or 7 dwts. proportion on the plates for a very large extent. Of a number of about 171 samples taken from the long stretch of properties belonging to the

Vaal River Proprietary (Limited).

east of Buffelskloof, the average assay result was not less than 15 dwts. per ton. This is an excellent testimony to the value of the series. Samples taken right away to the west on Buffelskloof, Rooderand, Tigerfontein, and Kromdraai, show equally good results. Scarcely a single blank can be obtained along the whole line. On the farm Kromdraai, just where the formation cuts across the river into the Free State, is located the Great Western property, on the Amazon reefs. Little or no work has been done on the greater portion of it. Some wonderfully good stuff was discovered there, and a 5 stamp coffee-mill sort of battery was put up in the old days with the usual result. The well-known but unfortunate Amazon Block is situated on the same line. The history of the company is well known, but it is, perhaps, not so generally known that two or three engineers were so impressed with the value of the property some time ago, that they offered 10 per cent. of the actual output to be allowed to take it on tribute. It is shortly to be reconstructed on a proper basis, when, it is hoped, its troubles will be at an end. Enough has been said to show that the Venterkroon district is a very promising one when the actual value of the reefs alone is considered. There are various other factors, however, to be calculated with in estimating the economical value of a property; the most important being the

Facilities afforded by Nature

for the extraction of the ore. In this respect there are few more valuable districts than that of Venterkroon. The reefs are commonly found along the axes of the hill ranges, which run more or less parallel with the strike or outcrop of the formation. The ranges are composed of hills varying from 100 and 200 feet to as much as 800 feet in height. In many cases it is possible to drive tunnels or adits to intersect the line of reefs, and there are millions of tons of ore which may be extracted without the necessity of heavily-timbered shafts and elaborate hauling machinery. For the same reason the costs for pumping during the development of this ore and its extraction will be practically nil. There are points which will be of material advantage in the opening up and working of the Venterkroon properties for some years to come. In addition to these facilities, there is the free milling and friable character of a large proportion of the ore to be considered. In view of all these circumstances, it may be said that the Venterkroon banket beds have, and will have, for a long time yet to come, a couple or three pennyweights of advantage in comparison with Rand ore, and this is a fact to be remembered. Fuel, when necessary, can be obtained at reasonable prices, Messrs. Lewis and Marks's colliery, at Vorensing being only 18 miles away. Water is abundant, and timber fairly so. It is not at all impossible, too, that at no distant date the splendid falls of the Vaal river, near Parys, may be utilised to generate.

An enormous electrical power

for transmission on to the mines. The right to a portion of the Vaal river water on Rietpoort, equivalent, if properly utilised, to several thousand horse-power at least, is owned by the great

mining corporation which is shortly about to commence operations in the district—the Vaal River Gold Fields Proprietary (Limited), to wit. It will be of interest to give a few details with reference to this company and its prospects.

It has been established with a nominal capital of £125,000, of which the working capital of £70,000 has been practically subscribed for, the reserve being £55,000. It holds nominal rights over an extent of country which forms about half the area of the Venterkroon gold field. The rights are secured by contract, and are held with regard to the following farms:—

Kodoesfontein	8,000 acres.
Buffelskloof	8,000 "
Leuwfontein and Buffelskloof	10,000 "
Kodoeslaagte	5,000 "
Total	31,000 "

The rights comprise all owners' mineral rights, including nym-pachts and claims; the free use of all land needed for roads, ropeways, cattle, buildings, dams, and work generally; the free use of timber for mining purposes; and the free use of water and water-courses. All this is subject to the respecting of the owner's domestic and agricultural water, enclosures, and fields, and to the quarterly payment, after January 1, 1896, of 5s. per claim per month for all land taken up in that manner. On the farms Kodoeslaagte, Rietpoort, and Koppieskraal, which have a frontage of about 25,000 yards, or (say) nearly 15 miles, along the Vaal river, the company has the sole right to the banks to lead out water for developing power and other purposes. This is a very important right, for upon the farm Rietpoort are found enormous rapids which have a considerable fall within a comparatively short distance. The power available by means of turbines has not yet been calculated, but if properly-arranged works are constructed it cannot be far off 10,000 horse-power at a minimum estimate. Throughout these farms the whole reef series of the Venterkroon gold field, as already described, runs for a distance of about 7 miles, the most northerly or Amazon series being at an average distance of about 8 miles from the rapids, so that power to any required extent could be supplied to the mines on the company's property. The nearest point to the river from the Amazon line on the estate is about 1½ mile. The facilities for mining and general treatment, therefore, are everything that could be desired; there is absolutely no necessity to use a single pound of coal for power purposes, and, as stated above, the reefs are to a great extent found running along the axis of high hills, so that adits driven in to intersect them would give, in some instances, several hundred feet of backs. There is a large amount of useful timber on the property, and abundant water for reduction requirements is to be got from the streams which run down the hill sides. The contour of the country, too, by-the-way, makes it extremely easy to convey ore from one point to another by gravitation alone, without the necessity of employing mechanical or animal power. With all these advantages it must be admitted that it will be possible to treat a much poorer grade of rock here than upon the Rand, or indeed any other section of the great "basin" periphery. In view of the fact that the London *Financial Times* has considered it necessary or advisable to state that it has not been possible to find anything better than 5 dwts. stuff on the Amazon line, a course which the *South African Review* has felt itself consistently compelled to follow in this instance, it may interest people to learn that out of

The 171 assays

made of banket on the Amazon series running through the property of the Vaal River Proprietary (Limited), some 64, or more than 30 per cent., were over ½ ounce, the results running as high as 8 ounces 17 dwts. 16 grains, in one case over a reef thickness of 6 feet. The number of assays yielding over 1 ounce, in the list referred to, were 34, or about 20 per cent. of the whole. It may be objected that the remarks quoted regarded the Amazon property more especially. The latest assays of free milling ore from that property range up to about 8 ounces per ton from 4 dwts. It is very evident that our London contemporary has been misinformed. On the Oden series samples assayed by Mr. Holleman, Government Analyst of Potchefstroom, ran from about 14 dwts. to 1½ ounce. The Roos series gives pannings up to 15 dwts. in places; but, as already said, very little work has been done upon it. In concluding, it must be particularly pointed out that in making calculations with regard to the payability of this district it is not necessary to make any comparison with the cost at the Rand. The opportunities for cheap working are so manifold in the Venterkroon district that if works are established upon a large scale the total cost of mining and treatment should, in a very great number of instances, range from 12s. to 13s. Allowing even 20s., there are still any number of big propositions which will pay handsomely. The dry crushing and direct cyaniding process, moreover, is eminently adapted to the district, to judge from the appearance of the ore and the quality of the gold, and it is proposed to adopt this process to a very wide extent. The Venterkroon field is in the position in which pretty nearly every new district finds itself at the outset, but like the others, Randfontein, Heidelberg, and the rest of them, it will assuredly come to the front. The leading financial houses of Johannesburg are well aware of the fact, to judge by the activity of their agents along the banks of the Vaal. As to the proclaimed ground, it is pegged from north to south and east to west, not a single acre being open.

THE PROPOSED NICARAGUAN CANAL.—In the latest survey which has been made, the cost of constructing the Nicaragua Canal is given as \$50,000,000, and the time of construction six years. According to the plans, the summit level of the canal will be 110 feet above mean sea level, and will be reached at each extremity by three locks, each 650 feet long and 65 feet wide. An artificial lake and repairing basin for ships in transit will be created by means of a dam across the San Juan river and an embankment across the San Carlos, near their junction, and from the last lock to Greytown on the east, and Brito on the west, the canal will be enlarged, thus forming an extension of the harbours where vessels can pass each other without detention.

GUADALCAZAR MINING COMPANY.—An extraordinary general meeting of the shareholders of this company was held on Tuesday at the Cannon-street Hotel, for the purpose of confirming certain resolutions passed at a previous meeting authorising the winding-up and reconstruction of the company.—Mr. William Farber, who presided, said that at the last meeting, a fortnight ago, certain resolutions were submitted, and the best day's business that was ever transacted in the interests of the company was then brought to a successful issue. The Chairman, in reply to a shareholder who asked whether sufficient capital was being called up, said the company had never from its inception had a proper working capital. The amount they proposed to call up would, however, give it sufficient, and he had every reason to believe that on the reconstruction being carried through an era of prosperity would come to the company such as it had never known. Mr. Farber reported that since the last meeting he had had two cablegrams from the manager, the latter one informing him that there was a steady improvement in the mine, and that the ore was running better than for some time past.—The resolutions were then put to the meeting, and carried unanimously, and the proceedings terminated.

VICTORIAN GOLD MINING.

By THOMAS CORNISH, M.A.I.M.E., Author of "Our Gold Supply," &c.

THE Tarnagulla gold field lies about midway between Dunolly and Inglewood, and was one of the earliest-discovered and richest of Victorian quartz reefing gold fields. The discovery and opening up of the celebrated Poverty reef was in 1855, and derived its name from the rich alluvial Poverty gully opened by a party of Maories from Poverty Bay, New Zealand. The prospectors of this renowned reef were Messrs. King, Hammond, and others, who had been working in the Maldon district without much success, and then tried their luck on this field, with splendid results following. The prospectors only held 50 feet in length on the reef, which was ultimately divided, Mr. King holding 25½ feet on the reef, from which he is said to have taken £120,000 in gold. The stone was immensely rich, and the first 40 tons of stone dollied (prior to the erection of machinery) yielded at the rate of 1 lb. weight to the bucket, or about 500 ounces per ton. The Prince of Wales claim, 85½ feet long, yielded £160,000 worth of gold. Other mines along the line also yielded remarkably well. In Bell and Hammond's claim the reef was 20 feet thick for a depth of 60 feet, and averaged 6 ounces per ton throughout. One crushing of 317 tons 17 cwt. gave 2397 ounces 17 dwts., and another of 339 tons yielded 1661 ounces. Three claims on the line of reef with a length of only 141 feet produced 59,257 ounces of gold from 24,369 tons of quartz. The total output of gold from this rich reef extending about 500 feet in length by about 430 feet in depth is estimated at over £1,000,000 sterling, some estimates going as high as £1,340,000 sterling.

The yields of gold from this reef often went as high as 40 ounces to 50 ounces per ton before the erection of efficient crushing plants when the poorer stone was put aside. The stone got richer as it went down, and widened out. In some portions of the reef at 400 feet in depth the reef was 23½ feet wide. The general average varied from 1 to 12 ounces to the ton.

Below this depth developments are now in progress to discover the continuation of the rich stone, and the company now holding an extensive area of ground on the line of reef (the Tarnagulla Company) have a shaft down to 1030 feet, three levels have been opened at 750 feet, 900 feet, and 1010 feet, but want of capital has delayed their proper development. There can be little doubt that with more extensive and energetic working, this once-celebrated reef will again come to the fore as a great gold producer. It is a mine well worthy of a judicious expenditure of capital.

About 1½ mile north of the Poverty group, on the same line of country, is the Yorkshire reef, on which was working the Yorkshire Company, which after paying about £35,000 in dividends stopped working, for want of capital to extend their operations. The company got gold value over £80,000, but for want of keeping a reserve fund, like many other companies with good prospects, came to a stoppage. On the same line is the Phantom and Specimen reefs from which good results have been obtained. Not long since two young miners went into an old shaft that had been left for many years, and after clearing it out and doing a little work came on a good block of stone which yielded 26 to 27 ounces of gold per ton, giving the lucky youths £3000. Other claims on this line are in work, and have been worked successfully. The Kangaroo reef, discovered on the surface, yielded £20,000 in gold, the first crushings giving 5 to 6 ounces per ton. Some claims on the Ironbark reef yielded £10,000 to a depth of only 210 feet, and on the Greek's Hill on the same line was taken about £80,000 to a depth of 400 feet from the outcrop on the crown of the hill, down to a depth of 45 feet, averaging 20 ounces to the ton.

The Corfu, Cambrian, and Sandstone Lines of Reefs.—The Greeks and Welshmen mustered in considerable force in this district in the early days. A party of Greek sailors opened the Corfu reef, at Corfu gully, which yielded handsomely from the surface, one crushing of 300 tons giving 3600 ounces of gold, and 53 tons from 9 to 35 feet yielding 1075 ounces. The Corfu Company produced gold value £18,000, the greatest depth being 179 feet. Machinery was then erected, but disputes amongst the owners caused a break-up of the company. The Garibaldi, north of the Corfu, got stone averaging 13 dwts. to 17 dwts. per ton.

North from the Corfu towards Lilanely is the Sandstone reef, which lay for years abandoned, like many other reefs on Tarnagulla and other gold fields. Very rich returns were got in the early days by former owners on this line, no less than £79,000 worth of gold being taken in a short distance of ground. The Victoria Company got £35,000, the Watkins £25,000, the Princess Royal and others £4,000, and the South Sandstone £5000. Some excellent results were obtained, but the general average was about 1 ounce per ton. An English company is now working the ground, and have put up a powerful plant of machinery, and are likely to be well paid if the mine is properly worked.

About three-quarters of a mile east of the Sandstone line is the Cambrian or New Chum line, which was found on the surface and dips north. The first returns were very rich, and a number of claims were quickly taken up. In the Prince of Wales's claim large blocks of golden stone were found, averaging from 1 ounce to 3 or 4 ounces per ton. At 270 feet a slide came in and shifted the reef to the east, which appears never to have been found since. Attempts were made to effect an amalgamation of the several mines on the line which had yielded well, but without success. Altogether the gold raised was about £200,000, and about £79,000 paid in dividends. The deepest shaft on the line is about 500 feet. This is a good show for a company to develop.

The Great Western and Other Lines.—Another important group is the Western line, which includes a large number of reefs proved rich near the surface, the Great Western giving £7000, the London £6000, the Growlers £16,000, Jim Crow £8000, Rise and Shine £13,000, and other claims with smaller amounts, the deepest shaft on the line being only 250 feet. A crushing from a reef 2½ feet wide of 43 tons gave 74 ounces.

The total value of gold raised from the Tarnagulla and Lilanely quartz reefs is estimated at £1,605,000. There can be no doubt that the Tarnagulla gold field has been one of the much-neglected ones, but offers a good field for a profitable investment of capital in well-selected and well-managed mines. I noticed when on this as on many other Victorian gold fields the lack of systematic development by deeper sinking and regularly crosscutting the country on the well-proved lines of reefs. The rich shoots of golden stone having cut out or been displaced, and the profits paid away in dividends, little practical effort has been made for prospecting further in depth, or on the lines of lodes. Thus many mines that opened up well on the surface to 300 or 500 feet in depth have been left in abeyance from want of capital and intelligent direction of labour.

PARIS LETTER.

(BY OUR SPECIAL CORRESPONDENT).

South African gold mines—Bogus companies.—Mining in Westralia.—The Tonkin coal mines.—The Russian petroleum industry.

THE mining market in Paris is more ready to respond to any upward movement of the Stock Exchange than to be affected by its periodical moments of weakness. During the past few days the favourable reports cabled over from London have given a remarkably healthy tone to mining scrip on the Bourse, and the amount of business done seems to be now attaining its maximum. Nearly all the first-class shares are in good demand, though the way in which investors make a rush upon certain shares for no apparent reason would be a source of danger if it were not for the fact that they are decided to have nothing to do with scrip other than that enjoying the highest reputation. As it is, the demand is running upon such shares as the Randfontein, which have been taken up very freely during the past few days, Buffelsdoorn Estate, and Ferreliras, while Robinson, East Rand Central and most of the others, have all undergone a substantial advance. The exploration companies are not meeting with any large degree of favour, as they seem to be entirely eclipsed by the purely gold mining concerns; but, nevertheless, the Bechuanaland Exploration Company's scrip has begun to advance, and will, no doubt, continue to do so. This system of opening up new territories by exploration companies is being greatly approved of by financiers in this country, who are constituting similar undertakings for the useful employment of French capital in West Africa and Siam. Once these companies begin to show that they are capable of earning large dividends, there will be as big a rush upon the shares as there is at the present moment upon gold mining scrip. Another enterprise that has just been introduced upon the Bourse is the Compagnie Amsterdam, which has been formed under the Dutch law for the working of mining properties in South Africa. It is not easy to see in what way the company can hope to get any solid footing on the Rand at the eleventh hour, but it is to be presumed that its origin will give it a certain advantage in its dealings with the Boer Government. This, however, is not a necessary guarantee to the success of a mining company.

One of the most imminent dangers to small investors is the increasing number of companies of doubtful character whose shares are being placed on the outside market. As there is nothing to control them these shares find a ready sale among the numerous small investors who are as eager to participate in gold mining as the large capitalists, and a vast amount of money, representing very often the savings of a life-time, is being directed into channels in which it must irretrievably be lost. Once the money is paid into the hands of the rapacious promoter there is no chance of recovering any of it by selling out, as the unlucky investor finds to his cost that he has signed an engagement binding him down to keep the shares for a certain period. This fraudulent business is being practised to such an extent, that if legitimate gold mining investment receives a check, it will be entirely through the ruin of these small holders, who are unable to protect themselves by dealing with honest brokers in high-class shares.

It will not be surprising if, before long, a good deal of attention is directed to mining in Westralia. Already rumours are afloat that the prospects of auriferous development in that country are greatly improving, and a report is current from German sources that the missing vein in the Londonderry Mine has been found. Whether or not there is any solid ground for this belief, it is certain that German investors have the greatest confidence in the Westralian outlook, and they are determined to take their risks in assisting the opening up of mining properties instead of waiting until the eyes have been picked out by English speculators. At the present moment there is a pretty active buying of Londonderry shares on German account, and the quotations are steadily rising, being now beyond the figure at which they were introduced. Of an entirely different character is the Smelting Company of Australia, whose shares are being offered on the Bourse this week. They have already risen a point, and the fact that such an enterprise can find support is proof enough that the public is beginning to interest itself in undertakings other than gold mining. In fact, the boom in auriferous investments has awakened the public to the advisability of putting its money to some account in foreign industrial enterprises, and it is generally considered that we are now at the commencement of a new era in the bolder and more active employment of French capital abroad.

The coal and other mineral resources of Tonkin are being persistently ignored by French capitalists who, in point of fact, have little confidence in the future of that colony so long as something is not done to reform the present wasteful administration. At the same time, this system of Government cannot have any appreciable effect upon the success or otherwise of private undertakings, because, with all its faults, the Government of Tonkin has shown a praiseworthy activity in assisting industrial undertakings of all descriptions. The production of the Tonkin coal mines is rapidly increasing, and is taking up a prominent position in Eastern markets to the detriment of English coal. It is true that this has been attained chiefly with the aid of British capital, so that, in a sense, there is some compensation for this displacement of trade in the Far East. The prospects of the mining industry in Tonkin are now greatly improved by the proposed construction of a railway, which will open up some of the richest provinces of China. The Compagnie des Mines de Chine has secured a concession from the Chinese Government for the laying down of a line from Lang-Tcheou, on the Chinese frontier, to Dong-Dang, a distance of 45 kilometres, and by this means the whole of a vast trade will be diverted from the south of China to Tonkin, while an almost unlimited market will be opened up for the disposal of the mineral and other products of the French colony.

For some considerable time past the Russian petroleum companies have found themselves face to face with an enormously increasing production and a steady diminution in price, which, if continued, will very soon result in a complete ruin of the industry. Unlike most other products it is not possible to regulate the supply to the demand, nor can the owners store up the whole of the petroleum which is being belched night and day out of the wells. The oil must be at once refined and sold, or it will run to waste. The companies have tried to stimulate the consumption of kerosene by facilitating its transport into the centre of Russia, and then an attempt was made to monopolise the French market, though without any appreciable success. The Russian oil cannot compete with the American, to which it is greatly inferior. Its refining leaves too large a percentage of by-product, which can only be used as a lubricant, and this material is a drug on the market. The illuminating power of the Russian kerosene is also much below that of the American. Nevertheless, the Russian companies find it absolutely necessary to protect themselves in one way or the other, and for some time past they have been carrying on negotiations with the American oil "trusts" for regulating the supplies to consuming markets in the hope that they would be compensated by more profitable prices. It seems, however, that the American companies will not entertain the Russian proposals. The Russian concerns now believe that they have found a way out of the difficulty by a treaty that has just been entered into with Greece, under which Russian kerosene is admitted duty-free in exchange for the admission of Greek currants into the Russian dominions for a period of 10 years. Greece consumes a large quantity of petroleum, which has hitherto been supplied by the United States, and it remains to be seen whether the new order of things will have the desired effect upon the Russian industry.

— The first batch of allotment letters in the TAITAPU GOLD ESTATES, LIMITED (New Zealand), have been posted.

METAL CIRCULARS.

Messrs. JAMES LEWIS and Son's Monthly Report on Ores and Metals, dated Liverpool, August 2, says:—Copper: Good merchantable has advanced £3 7s. 6d. per ton during the past month from £42 7s. 6d. to £45 15s., in sympathy with a gradual advance of 1 per cent. per lb., or £4 15s. per ton, in the New York quotation—from 10.75 to 11.75 cents per lb. Large purchases have been made on both English and American account, the total transactions amounting to about 30,000 tons. Values with us are still considerably below those ruling in New York, and shipments from hence to the United States may soon be made. We are advised that the consumption in the United States is quite phenomenal at present. Shipments to Europe for the next two months are expected to be very small and confined to sales made some time ago, efforts to cancel some of these sales being made. Should this prove to be the case, a further considerable advance in values on this side appears almost certain. For English refined copper there has been an active demand, and nearly all producers are well sold forward, many of them having now withdrawn from the market. Consumers' stocks are believed to be exceptionally small. The report of the Namagawa Copper Company states that 5123 tons (21 cwt.) of ore of about 30 per cent. produce for 1894 were raised during the year, realising an average price of 7s. 2d. per unit, and yielding a profit of £6875. Imports are 476 tons less, and deliveries 1801 tons greater to date than during the same period last year. The total arrivals in England and France for the month have been 8800 tons, and the deliveries 8765 tons fine. Stocks have increased 35 tons. The arrivals in England from Chili during the month have been 1473, and the deliveries 1107 tons fine, and from other countries 4928, and 4995 tons fine respectively. The arrivals in England from the United States have been 410 tons bars, 135 tons ingots, and 1526 tons matte, equal to about 1369 tons fine copper, and in France 960 tons fine. The Chili charters for the month are advised as 1700 tons, and exchange 17½. Quotations to-day are:—Chili bars and good merchantable copper £45 15s. for cash, and £46 2s. 6d. for three months' prompt, buyers. English best selected ingots £50 to £10 10s., and tough cake £49 to £49 10s. per ton, 9s. for ore of 20 per cent., and 9s. 3d. per unit for Chili regulus or American matte, free from silver.—Stocks of copper (tons fine): Total visible supply, 72,729, 58,015, 59,222, 50,516, 51,293, 54,547, 58,515, 57,938.—Quotations:—Bars, £57, £52, £47 17s. 6d., £42, £38 3s. 9d., £43 13s. 9d., £42 7s. 6d., £42 15s. Ore, per unit, 11s. 3d., 10s., 8s. 3d., 8s., 7s., 8s. 6d., 8s. 3d. 9s. Imports of copper (exclusive of pyrites and precipitate to export) from January 1 to date:—Chili into Liverpool and Swansea, 10,412 tons; other countries into Liverpool and South Wales, 31,649 tons; other countries into London, 763 tons; Australia into London, 4706 tons; Japan into London, 2875 tons; total, 50,411 tons. Chili into France, 1879 tons; America into France, 4737 tons; Mexico into France, 3850 tons; other countries into France, 1030 tons; total, 11,496 tons. Total, 61,907 tons fine. Deliveries ditto in England and France, 58,854 tons fine. Imports of other than Chili copper into Liverpool and South Wales during the first seven months of 1895:—From United States, 11,742 tons; Mexico, 4186 tons; Peru, 219 tons; River Plate, 92 tons; New Quebrada, 360 tons; Newfoundland, 1167 tons; Spain, 1671 tons; Spain (precipitate), 7525 tons; Portugal, 192 tons; Italy, 208 tons; Norway, 272 tons; Cape of Good Hope, 3665 tons; sundries, 360 tons. Total, 31,649 tons fine.—Gold, 77s. 9d. per ounce standard. Silver has fluctuated between 30½d. and 30 3/16d. per ounce standard, closing at 30½d. Quicksilver from second-hands is quoted at £7 3s. 6d. to £7 4s. per bottle.—Sulphate of copper: The season now being over, the demand is very slow at £15 5s. to £15 10s. per ton.—Lead: £11 2s. 6d. to £11 5s. per ton for English; soft Spanish, £11 to £11 1s. 3d.; rich in silver, £11 2s. 6d. to £11 17s. 6d. per ton; ore of 70 per cent., £4 13s. per ton, and fine silver value. The import of silver lead from Mexico amounts to about 200 tons.—Antimony: £32 per ton. Nickel offers at 1s. 1d. to 1s. 2d. per lb. net. Tin advanced from £63 to £66 10s. on the 26th, but closed at £65 per ton. Bank rate of discount remains at 2 per cent.

Messrs. RICHARDSON AND Co.'s Monthly Circular, dated August 2, says:—The stocks of Chili copper produce remaining unsold here on the 3rd ult., were as follows:—

	Ore, Tons.	Regulus, Tons.	Copper, Tons.
Arrived since:—			775
July 15, Sarmiento (s) from Caldera	1360	45	100
	1360	45	875
Less Sales	1360	45	—
Present Stocks of Chili being.....	—	—	875
Italian	430	—	—
Mexican	—	—	1219
American	—	—	469
Total unsold at Swansea.....	430	—	2563

Equivalent to about 2538 tons in fine copper. The above parcel of Copiapo ore and regulus per Sarmiento (s) was sold "to arrive" on private terms. Chili charters for the first half of July were advised as 850 tons fine, and a like quantity for the second half. The total visible supply of copper on July 31 is given as 57,817 tons, against 58,182 tons on June 30, thus showing a decrease for the month of 365 tons. We have to note a good improvement in the price of copper since the issue of our last circular on July 3, when quotations for G.M.B.'s were £42 7s. 6d. to £42 8s. 9d. cash. Nearly 30,000 tons changed hands during the month at prices ranging from the above figures to £45 11s. 3d. on the 31st, the last named being the highest price realised since June, 1893. Prices in this country have, doubtless, been largely influenced by the strong market and advance of prices in the United States, where quotations are considerably above those ruling here. Quotations to-day are as follows:—Copper. Ores and regulus, 8s. 6d. to 9s. 6d. per unit; Chili bars G.O.B.'s and G.M.B.'s, £45 18s. 9d. to £46 3s. 9d.; tough ingot, £48 to £48 10s.; best select, £49 to £49 10s. per ton. Sulphate of copper £15 5s. to £15 10s. per ton.—Silver. Bar, 30½d. per ounce standard.—Tin. English block, £68 10s.; Straits, £64 12s. 6d. to £65 2s. 6d. per ton.—Lead. English pig (O.S.B.'s), £11 2s. 6d. to £11 5s. per ton. Spelter £15 17s. 6d. per ton. Bank rate 2 per cent.

Messrs. HARRINGTON AND Co.'s Copper Report, dated Liverpool, August 2, says:—Chili charters for the second half of July are advised as 850 tons, against same quantity for the previous fortnight, making 1700 tons for the month. The total since December 31 last is 13,250 tons, and the quantity same time last year was 12,350 tons. Exchange 17½d. Since our last we have had another excited market for G.M.B.'s, a large business being done at prices ranging from £44 3s. 9d. cash, and £44 10s. three months, up to £45 17s. 6d. and £46 5s. respectively, closing to-day with buyers of cash at £46, and three months at £46 7s. 6d. The price of Lake copper in the States has advanced from 11 cents to 11 7/8 to 12 cents, this price being much above the parity of values here, where holders taking advantage of the rise by taking their profits has caused our market to be slower in responding to the rise on the other side. The total stocks in Liverpool, Swansea, London, and Havre are 53,717 tons, against 52,711 tons on the 18th ult., showing an increase of 1006 tons for the fortnight, but with a decrease for the previous fortnight of 971 tons, makes the increase for the month 35 tons. The stocks include about 2200 tons of copper sold, but not yet delivered to smelters. The visible supply for the fortnight is 57,938 tons, against 57,058 tons on the 18th ult., showing an increase of 880 tons. The month's figures show a decrease of 577 tons. Refined and manufactured sorts are firm and in good demand. Quotations being:—Tough cake £48 to £49 10s., best select £49 to £49 10s., Indian sheets £52, strong sheets £54 10s. to £55, and yellow metal sheet 4½d. to 4½d. per lb. The sales of furnace material comprise—40 tons argilliferous Chili regulus, on private terms; 18 tons Caban

precipitate, at 8s. 10½d.; 113 tons Spanish precipitate, at 9s. 3d.; 60 tons Portuguese precipitate at 9s. 3d.; and 63 tons Coro Coro barilla, at 9s. 6d. per unit. Import of Chili copper during the past fortnight 769 tons fine, against 1423 tons fine same time last year. Delivery of Chili copper during the past fortnight 438 tons fine, against 425 tons fine same time last year. Import of other copper during the past fortnight 2677 tons fine, against 3152 tons fine same time last year. Delivery of other copper during the past fortnight 1695 tons fine, against 2839 tons fine same time last year. The total imports of Chili and other copper into Liverpool and Swansea since January 1, have been 42,061 tons; deliveries during the same period 38,291 tons fine; for same time last year the figures were 45,248 and 38,963 respectively. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at Liverpool, 10 tons ore, 39,279 tons bars, 661 tons ingots; Swansea, 875 tons bars; total, 10 tons ore, 40,154 tons bars, 661 tons ingot, representing about 40,817 tons fine copper, against 40,486 tons July 17, 1895, £44 2s. 6d. price of cash bars, against 31,873 tons fine copper August 1, 1894; against 30,474 tons fine copper August 2, 1893, £41 17s. 6d.; against 31,411 tons fine copper August 3rd, 1892, £44 12s. 6d. Stock of other copper, contained in matte, foreign ore, and Spanish precipitate, 7762 tons fine, against 6780 tons July 17, 1895, against 6677 tons August 2, 1894; stock of Chili bars and ingots in Havre, including Ruess and Dunkirk, 585 tons fine against 785 tons August 2, 1894; stock of copper other than Chili in Havre and Dunkirk, 996 tons tons fine against 550 tons August 2, 1894; stock of Chili copper afloat and chartered for to date, 3221 tons fine against 2368 tons August 2, 1894; stock of foreign copper in London, chiefly Japanese and Australian, 3557 tons fine against 5090 tons August 2, 1894.—Tin: The market for Straits since our last has been irregular, and prices have risen in sympathy with copper, highest £66 15s., lowest £64 10s., closing to-day at £64 12s. 6d., Australian £65 2s. 6d., English £69, and Peruvian £50 to £62, according to quality. Sulphate of copper firm at £15 10s. spot. Lead during the past fortnight has been firm, closing at £11 to £11 1s. 3d. for Spanish, and £11 2s. 6d. to £11 5s. for English.—Spelter: The market since our last has been firmer, and prices advanced to £15 5s. for ordinary Silesian brands.—Quicksilver: Since our last the market has been quiet, and closes steadily at £7 3s. 6d. to £7 4s. per bottle for Spanish, and 30 3/16d., closing to-day at 30½d. per ounce standard. Antimony steady, Star regulus at £32 per ton. Ore irregular, about £7 10s. to £8 to 50 per cent. good quality and produce. Bank rate of discount remains at 2 per cent.

MINING IN CORNWALL AND DEVON:

NOTES ON MINING IN THE WEST.

(FROM OUR SPECIAL CORRESPONDENT.)

THE combined influences of the Bank Holiday and the unsettled condition of the tin market have prevented any great activity in the share market, but in spite of these two factors there has been a fair amount of business, sufficient to show a marked difference from that of a couple of months ago, and prices in most cases have remained firm. The position of tin continues to be naturally the chief topic of conversation, and the opinion seems to gain ground, notwithstanding the heavy stocks, that the near future is going to show some improvement. This opinion is held not only in Cornwall apparently, for if one may judge by the anxiety of some outsiders to pick up stock at existing prices, there is reason to believe that other people are anticipating the rise, and want to have a "look in" when the rise comes off. In the meantime, people must be prepared for fluctuations in both the tin and share markets.

THE East Pool-Wheel Agar water difficulty has again presented itself, and in an even more acute form. It is not very creditable to the executive of either mine to find that, although six or eight weeks have elapsed since the temporary arrangement which has just terminated was first entered into, nothing appears to have been done by the executive of either mine—so far, at any rate, as the adventurers are aware of—to bring about a settlement on some substantial and permanent basis. It is not calculated to increase the confidence of the outside investor to find that two neighbouring mines are at such variance that rather than concede, there is a danger of both being only partially available for working. It is not for us to suggest as to which direction the adventurers may have to look for those the more responsible for the deadlock, but we hope sincerely that the adventurers in neither mine will sit quiet and allow the present condition of things to continue. There is no question about the offers on both sides having been wide of the mark when the last conference took place between the committees, and as there seems to be no objection on the part of either to an amalgamation on fair terms, it seems that the most obvious solution of the difficulty is for the matter to be left to the arbitration of (say) three gentlemen in whom confidence might be placed, and to abide by that decision whatever it may be. At the present moment there is a disposition of obstinacy, and it is whispered that so far as East Pool is concerned, the intention is to let the water in to the 160, from where it will drain into South Crofty, and in so doing they hope to bring pressure on the lords to interfere. The wisdom of such a course is, of course, open to question, and it is already being criticised. The matter requires to be dealt with promptly and firmly, and it is unfair to leave East Pool committee so depleted in number as to only now include Mr. J. B. Branwell, Mr. Henry Rogers, and Mr. Woolcock to deal with it. The adventurers should be called together at once, and they would then probably strengthen the executive for the purpose of dealing with the whole thing. To talk about leaving such a matter to the lords to settle is childish, and an admission of their inability to grapple with it.

IT will be a source of gratification to other than those who have been chiefly responsible for the conversion of Dolcoath into a Limited company, to find that the 50,000 shares which were offered to the public at a premium of half-a-crown by the British and Foreign Exploration Company, were subscribed for nearly four times over. The applications would have been very much larger but for the fact that many people in the country neglected to apply because they regarded it as certain that they would not secure allotment. A few thousands, however, went to Cornish shareholders, but we believe the large majority went to people who had before but a very small, if any, holding in Cornish mines. Probably the idea of the holders in offering the £0,000 to the public was to scatter the shares over a much larger area, and so secure a bigger market. We understand that a perfectly fair allotment was made in accordance with the applications sent in.

SPECIAL meetings of both Tincoff and Cook's Kitchen are to be held on Monday, for the purpose of considering amalgamation on the basis already agreed upon by both committees. The general impression is that the scheme will be carried through without much difficulty.

TIN MINING IN SINGAPORE.—Last year's output of tin in Singapore exceeded any previous year's record. Exports rose by 17 per cent. over those of 1893, and local prices have been kept up in spite of a heavy fall in London quotations. There is money in the Singapore tin mines. The only drawback to their prosperity is scarcity of labour.

COLLIERY EXPLOSION IN PRUSSIA.—An explosion of fire damp and coal dust occurred in the Prinz von Preussen Mine, near Bochum, on July 25. The total number of miners in the pit at the time of the explosion was 44, of whom 38 were killed and eight injured. The others were unhurt.

THE MAGNETIC SEPARATION OF IRON ORES.*

By CLINTON M. BALL.

IN many localities throughout the world magnetic iron ore is found in large bodies, and in convenient proximity to other resources required for its conversion into commercial iron and steel. Many of these would have great commercial value if they were suitable for direct use in the operation of steel-making, on account of their nearness to the principal points of consumption. But most of these ores are associated with substances capable of entering into deleterious combinations with iron or its oxides, and thus are unfit for use in the production of the higher grades of finished metal. It is only since the development of the Bessemer process that the art of the chemist has come to the aid of the manufacturer in the investigation of the causes and effects of the presence of these pernicious elements, the most common of which are phosphorus and sulphur, during the process of reduction. Generally, though not always, these elements are found existing in non-magnetic compounds—a circumstance which has led to the expenditure of much time, money, and ingenuity in unsuccessful attempts to effectually separate the magnetic oxide of iron from crushed ore, and from sands, in which latter it occurs in great abundance in many parts of the world.

The enormous increase in annual consumption which has resulted from the cheapening of steel through improved processes of manufacture is forcing steel makers to enquire whence are to be obtained the future supplies of Bessemer ore to meet the ever-increasing demands of the trade—a question only partially answered by the remarkable developments, in recent years, of the ore ranges of the Lake Superior district. The future prosperity of American steel manufacture must depend largely upon the ability of our manufacturers to meet the world's lowest prices, and this, in turn, is independent upon the certainty of an adequate supply of the raw material at prices, at least, but little in advance of those ruling at present.

Theoretical study of the conditions of economical production inevitably resulting from the industrial depression of recent years has led, among advanced furnace managers, to a keen appreciation of the important advantages attending the use of the richer ores, in the way of improved quality, increased output, economy of fuel, and general reduction in cost per ton of product. This, in turn, has directed attention to the peculiar advantages possessed by properly-prepared magnetic concentrates, consisting, as they do, not alone in the low percentage of deleterious impurities, but in what is no less important in steel-manufacture—absolute uniformity in grade. Both the theoretical and practical importance of magnetic concentration as a factor in steel manufacture has been fully determined, and is now freely conceded; it only remains to ascertain to what extent the process is commercially feasible under existing competitive conditions.

The history of the art of magnetic concentration is largely one of unbroken capital, abortive experiment, and unrealised expectations, and in the category of helpless failures must be counted some of the most ambitious and expensive undertakings of recent years. Without attempting to dwell upon these, it will be sufficient, in the present paper, to point out the road to successful practice, and to make brief reference to what has been actually accomplished.

In attacking the problem of ore-separation from its practical side, the first consideration must be that of the maximum possible efficiency of the method of separation proposed. In earlier days the experimenter, fascinated by the mysterious rush of ferruginous substances towards magnetic poles, hastily concluded that a powerful magnet—and, of course, the more powerful the better—combined with any crude apparatus for moving the ore into and the magnetic constituents out of its sphere of attraction, would fulfil every requirement of the problem. It was, moreover, assumed, with a confidence born of inexperience, that, in a finely-divided mixture of magnetic ore and non-magnetic gangue passing in a stream through a magnetic field, the former might be cleanly separated from the latter into "heads" of substantially pure magnetic oxide and "tails" of barren gangue, by a simple two-part division. Not until the history of hundreds of failures had been written into the archives of the patent offices of America and Europe, did it, apparently, occur to anyone that any virtue might be found in a specific and rational distribution of the lines of magnetic force with reference to the moving masses of pulverised ore; and even at the present time many persons representing large interests in iron mining and metallurgical operations are apparently wedded to, and unable to see beyond, these fundamental fallacies of inexperience, and so, from a disastrous experience of unsuccess, rashly jump to the conclusion that magnetic separation, as a useful art, can have no existence.

In determining the efficiency of a proposed method of ore separation, representative samples, produced under conditions of actual commercial performance, of the crude ore, the concentrate, and the tailings, should be obtained, and their respective percentages of magnetic and non-magnetic constituents accurately ascertained. The efficiency and practical value of any system may then be ascertained by the application of simple formulae. In order to satisfactorily meet the conditions of transportation and use, a concentrate should have the coarsest possible granulation combined with the highest attainable purity, the respective percentages of sulphur and phosphorus being brought at the same time, if possible, within Bessemer limits. Chemically pure magnetic oxide corresponds to the formula Fe_3O_4 or 72.42 per cent. of iron and 27.58 per cent. of oxygen. Crystals of this oxide obtained from different mines will vary widely in size, but those from each individual mine are likely to present a general uniformity in character and dimensions. The general average of such ores may be taken to consist of about equal parts of magnetite and gangue. In the concentration of such ores, if the percentage of magnetite be raised to 90, with 45 per cent. of magnetite left in the tailings (corresponding to 65.18 per cent. of iron in the concentrate and 34.82 per cent. of iron in the tailings), the result may be looked upon as satisfactory, inasmuch as this standard in the concentrate will usually reduce the proportion of phosphorus and sulphur within the required limit.

In this case it requires 1879 crude units to make 1 concentrate unit, and 95.79 per cent. of the magnetite in the crude ore is saved in the concentrate, while 4.21 per cent. is lost in the tailings; the actual efficiency of the operation of separation will, therefore, reach nearly 98 per cent. It might seem at first sight as if such a result as that above indicated might be realised by any well-constructed separator, irrespective of its particular type, provided sufficient magnetic force were present to prevent the escape of magnetic particles into the tailings. But the result in reality involves a more complex series of operations than would at first appear. The concentrate ought to be as coarse as possible, not only for technical reasons already stated, but because of the enhanced cost entailed

by unnecessarily fine crushing—a cost which, in some instances, might easily make all the difference between commercial success and commercial failure. Moreover, a sound theory of ore-separation dictates that in the initial stages of the process the operation of crushing should be carried out just far enough to cause the product to correspond in the average dimensions of its fragments with those of the pure magnetite. A mass of ore in this condition will contain pieces of pure magnetite, others of pure gangue, and still others of a complex character—part magnetite and part gangue—the latter constituting perhaps 10 per cent. of the whole. It is obviously desirable that, when in this stage, the three grades of material should be separated before going further, inasmuch as the pure magnetite would require no further treatment, and the pure gangue might be rejected as tailings, thus at once completing the treatment of at least 9-10ths of the whole mass. On the other hand, the composite portion of the material, if permitted to pass into the concentrate, would carry all its impurities with it, and at the same time lower the percentage of iron in the product, but if thrown away with the gangue would involve an inadmissible waste of valuable material. This intermediate portion, therefore, should be re-crushed to a fineness sufficient to liberate substantially all the magnetite from its adherent gangue, and afterwards re-separated, after which the respective products of re-separation may be added to the concentrate and tailings of the preliminary separation. It will be obvious that the "middlings" resulting from the preliminary separation must closely correspond in grade to the average of the crude ore, and that but a comparatively trifling expense need be involved in the reduction and re-separation of so small a proportion of the original mass. The great importance of this three-part method of treatment may be demonstrated by an analysis, which need not be given here, the results of which show that if the middlings should be added to the concentrate, instead of being re-crushed and re-separated, the product would consist of 57.9 per cent. of concentrate and 42.1 per cent. of tailings, while, on the other hand, if the middlings should be thrown out, the product would consist of 47.9 per cent. of concentrate and 52.1 per cent. of tailings.

Even the apparently small difference between two concentrates, one containing 60 per cent. and the other 65 per cent. of iron, is really of very great importance, for, while the latter would contain only 10 lbs. of gangue in each 100 of concentrate, the former would contain nearly 17 lbs., and would usually carry with it such an amount of sulphur and phosphorus as to render it wholly useless for Bessemer requirements. Moreover, experience has demonstrated that a difference of no more than five units of iron in each hundred, in the charge of a blast furnace, may make a difference of as much as 20 per cent. in its effective output.

In view of the above considerations, it is not difficult to understand the reasons underlying the disastrous commercial results of attempts at two-part separation by magnetism, as well as by water-jigging and other analogous methods, or why the successful practice of the art has so long been compelled to await the advent of a separator constructed in accordance with scientific principles.

It will readily be understood, after what has been said, that the successful carrying-out of the three-part process of separation above outlined must require an apparatus capable of working with great precision. Such an apparatus must discriminate accurately between the different grades of material, must make a clean selection of magnetic from non-magnetic material, and, among particles of mixed material of varying degrees of purity and magnetic susceptibility, must differentiate the middlings from the pure magnetite. All this, however, has been successfully accomplished by some of the recent machines.

(To be Continued.)

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

MR. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares, Redruth, Cornwall, reports under date of August 8 (four o'clock) as follows:—We have had but little life in our market this week, and prices suffered in the latter part of the week. Following are quotations:—Blue Hills, 3 to 3½; Carn Brea, 2½ to 3; Cook's Kitchen, 1 to 1½; Dolcoath, 2½ to 3; East Pool, 5 to 5½; Killifreth (New), 1s. 6d. to 2s. 6d., premium; East Pool, 4½ to 5; Killifreth, 13s. to 15s.; South Crofty, 3 to 3½; Tincroft, 9½ to 10½; West Frances, 1½ to 1½½; West Kitty, 5½ to 5½½; Wheal Bassett, 1½ to 1½½; Wheal Grenville, 13½ to 14½; Wheal Kitty (St. Agnes), 3 to 3½; Polberro, 3 to 3½.

MR. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (August 8) as follows:—The mining market has been quiet, with but few transactions, on the unexpected decline of the tin standard, most shares offering at lower prices. Closing prices:—Blue Hills, 8s. 6d. to 10s.; Carn Brea, 2½ to 3; Devon Consols, 30s. to 31s. 6d.; Dolcoath, 1 to 1½, fully paid; partly paid, 2s. to 3s. 6d.; Drakewalls, 2s. 6d. to 3s.; East Pool, 5 to 5½; Killifreth, 12s. 6d. to 14s.; Levant, 5 to 5½; Polberro, 16s. to 17s. 6d.; South Crofty, 14s. to 15s.; Tincroft, 9½ to 10½; West Frances, 1½ to 1½½; West Kitty, 5 to 5½; Wheal Bassett, 1½ to 1½½; Wheal Grenville, 13½ to 13½½; Wheal Kitty, 4s. to 5s.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers and Mining Share Dealers, Redruth, write under date of Thursday, August 8:—The heavy Straits shipments and lower prices in the tin market have somewhat checked the recent advance in Cornish shares, and the close is rather dull, with but little doing. Dolcoaths (which are easier since the allotment), Killifreth, Tincrofts, and Wheal Bassetts have been chiefly dealt in, but quotations generally show a decline. Quotations herewith:—Blue Hills, 3 to 3½; Carn Brea, 2½ to 3; Dolcoath (fully paid), 2½ to 3s.; ditto (partly paid), 2s. to 3s. 6d.; East Pool, 5 to 5½; Killifreth, 13s. to 15s.; Polberro, 3 to 3½; South Crofty, 3 to 3½; South Frances, 1½ to 1½½; Tincroft, 9½ to 10½; West Frances, 1½ to 1½½; West Kitty, 5 to 5½; Wheal Bassett, 2 to 2½; Wheal Grenville, 13½ to 14½; Wheal Kitty, 4s. to 5s. Tin, 63½.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write August 8 (noon):—A change has come over the market for railway stocks since we last wrote, home rail and Americans being easier almost all along the line. As regards the former the rises are as follows:—Caledonian undivided 1½, Lancashire and York 1, London and North Western ½, and Sheffield A. ½. All the rest are lower, the most conspicuous falls being ½ in Dover A. and ½ in North British Deferred on the closing of stale "bull" accounts in Glasgow. Mexican Rails mark an advance of ½ to ½ in Ordinary and 1½ in First Preference, but Canadians have been neglected, and on balance show declines of ½ in Pacific, 1 in Grand Trunk Guaranteed and First Preference, ½ in Second Preference, and 3-16 in Ordinary. Americans have been flat and finish about the lowest points of the week. The condition of the exchange market and the resumption of gold shipments are once more drawing attention to the unsettled currency position in the United States, and apprehensions are being felt lest the withdrawals of gold may assume larger proportions. Louisvilles have fallen 1½, Eries 1-16, Unions 1½, Denver Pref. ½, Milwaukee 3, New York Central 3, Ontario 3, and Reading ½; the one exception to the general decline has been Atlantic First, which are 1½ better on a large traffic

increase for June. Foreigners somewhat contradictory, but Spanish, with a drop of 1½, is the only stock which calls for comment. The rest of the changes will be seen below:—

CONSOLS.—Higher: 2½ per Cents. 1-16.
COLONIAL REGISTERED AND INSCRIBED.—Higher: Victoria Inscribed, 1.—Lower: New South Wales Inscribed, 1.
CORPORATION STOCKS.—Higher: Blackburn Three and a Half per Cent., 1; Liverpool Three and a Half per Cent., 1; Manchester Three per Cent., 1.—Lower: Manchester Four per Cent., 1 to 1½.
FOREIGNERS.—Higher: Argentine Six per Cent., 1; Argentine Five per Cent., 1; Brazilian Four and a Half per Cent., 1; Egypt Unified, 1; Mexican Six per Cent., 1; Uruguay Three and a Half, 1.—Lower: Brazilian Four per Cent., 1; Italian Rentes, 1; Spanish Four per Cent., 1½.

BANKS.—Higher: Imperial Ottoman, 1; London and Midland, 1; Manchester and County, 1; Manchester and Liverpool District, 1; Parr's Banking, 1.—Lower: Bank of Liverpool, 1.
INSURANCE.—Higher: Lancashire and Yorkshire Accident, 1-16; Liverpool, London, and Globe, 1; Manchester Fire, 1.—Lower: London and Lancashire, 1; Royal, 1.

MINES.—Higher: Chartered, 1 to 15-16; Cape Copper, 1; Consolidated Gold Fields, 1; De Beers, 1½; Rio Tinto, 1-16.—Lower: Londonderry, 1 to 1½.

TELEGRAPHS.—Higher: Anglo-American, Deferred, 1; ditto, Preference, 1; Eastern, 1; Eastern Extension, 1; Telegraph Construction, 1.

COAL, IRON, &c.—Higher: Cammells, 1 to 1½; A. Knowles and Sons, 1; Nantyglo Preference, 1.—Lower: Ebbw Vale, 3 16.

BREWERIES.—Higher: Bents, 1; Taylor's Eagle, 1; Threfall's, 1; ditto, Preference, 1.

MISCELLANEOUS.—Higher: Bell's Asbestos, 1; Bovril, 1½; Brooke Bond, 1; Bryant and May, 1; Crosses and Winkworth, 1; Eastmans, 1; Manchester, Edison-Swan, 1; Globe Telegraph and Trust, 1.—Lower: Henrys, 3 16; Hudson's Bay, 1; Spiers and Ponds, 1; Northern Assets, 6d.; Canal Ordinary, 1-16.

LATER (4 p.m.)—The declaration of the Great Western dividend of 3½ per cent. against 4½ per cent. caused a fall of 1 per cent. in the stock, but in no way affected other home rails, Leeds, London, and Midlands all being in advance. Americans and Canadians without feature, but Mexican Rails distinctly firmer.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (August 8) writes:—Since last report (June 13) the markets have generally improved, notwithstanding the holiday season, unsettled state of foreign politics, and the interruption to business caused by the dissolution of Parliament and General Election. The cheapness of money and good trade reports have helped the advance in prices. A 19 days' account, for settlement August 14, is now in progress, and transactions continue on a very large scale.

In shares of coal, iron, and steel companies prices have generally improved. Fifeshire Main Preference higher, as the damage done by the recent accident was mostly covered by insurance. Steel Company of Scotland shares have improved to 6½, on better trade prospects. Niddrie are at 4½. 6d. Roswell Gas Coal shares wanted. Sydney Harbour Colliery shares offered. Stewart and Clydesdale are up to 9½. Marbella declined from 56s. to 45s. on the issue of a poor report.

In shares of copper concerns prices have improved along with the market for the metal. Arizona advanced from 23s. 6d. to 50s. 6d., and are expected eventually to see higher prices. Mason and Barry are at 60s. Tharsis touched 10½. 6d., and Tinto 17½. The latter company have issued £3,600,000 Four per Cent. First Mortgage bonds at par, and paid off their Five per Cent. Mortgage bonds.

In shares of gold and silver mines the principal dealings have been in Africans. The record returns of the Witwatersrand output have helped the advance in prices. The determination of the Government to construct the Uganda railway, and the remarks by Sir Edgar Vincent that the Transvaal will be the first auriferous region of the world, are also favourable. The Wemmer Company declared a dividend of 100 per cent., as expected. The dealings in Chartered Company shares have been enormous, and the price touched 7 1-16 ex rights to-day. The company is increasing its capital from two millions to two and a-half millions, the extra 500,000 shares being offered *pro rata* at 70s. each. This will enable the debenture debt to be paid off, as well as to promote the development of the company's properties. The returns from the Indian mines are increasing satisfactorily, except those from the Mysore, which is affected by want of water; the company is erecting a large cyanide plant. Golconda higher on the first clean-up—115 tons and 528 ounces. Broken Hill have been largely dealt in. At one time the price went under to 30s. on the announcement that one monthly dividend would be dropped and fire breaking out at the mine. A recovery has since set in to 35s. on statements that a successful mode of treating the sulphides has been discovered, but this is not confirmed yet by the company. African Estates are at 57s. 6d.; Aurora, 33s. 9d.; Achilles, 4s. 3d.; African Properties, 64s.; African Recovery 38s.; Afrikaner, 62s. 6d.; Bayley's Reward, 8s. 6d.; Big Bow, 33s. 9d.; Blagrove, 3s. 3d.; Balkis Eersteling, 7s. 3d.; Caledonian, 4s.; Clewer, 72s. 6d.; Cameron Block, 9s. 6d.; Central Exploration of West Australia, 48s. 9d.; Doornkop, 12s. 6d.; Emma, 1s. 14d.; East Rand, 7 3-16; Eastleigh Deep, 36s. 6d.; Frontino, 26s. 6d.; Gwanda, 3s. 9d. premium; Gay Fawkes, 14s.; Henry Noarwe 7½; Kapaanga, 14s. 6d.; Kernalpi, 20s.; Jumpers, 8½; Klerksdorp, 28s.; Lisbon, 8s. 3d.; Langlaagte B, 36s. 3d.; L'impard's Vlei, 32s. 6d.; Loma, 1s. 9d.; Londonderry, 13s. 6d.; La Plata, 2s. 3d.; Londonderry Extended, 5s. 6d.; Mallina, 18s.; Metropolitan, 59s. 3d.; Murchison New Chum, 27s. 6d.; Montana, 11s. 6d.; Murchison Gold Fields, 9s.; Otto's Kopje, 6s.; Orion, 68s. 9d.; Oceana, 81s. 3d.; Randfontein, 76s.; Rodesia, 18s. prem.; Royal Oak, 4s.; South African General Development, 9s.; Sutherland Reef, 13s. 6d.; Southern New Chums, 1s. prem.; Sheba, 45s.; Transvaal Estates, 35s.; Thistle Reef, 4s. 3d.; Victoria and Altamira Preference, 2s. 6d.; White Rose, 3s. 9d. prem.; Willoughby's, 33s.; and Wealth of Nations, 11s. 3d. prem.

In shares of miscellaneous companies prices have also improved. Oil companies shares show a general advance, as the price of oil has been fixed 2d. per gallon higher than last year. Broxburn have improved to 14½, Hermand 2s. 6d., Pampherton 10½, and Young's 58s. 6d. Nobel's Explosives are at 14½, Robarite Explosives, 30s.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69 Hanover-street, Edinburgh, report as follows under date of August 8: The leading Scotch railway stocks have declined, notwithstanding the favourable traffic returns. British South Africa Chartered shares have attracted a great deal of attention and the price has risen from 103s. 6d. to 135s. Stewart and Clydesdale shares have risen from 5½ to 9½; Niddrie and Benhar from 40s. 6d. to 41s. 6d. Steel Company have declined from 62s. 3d. to 61s., Marbella Iron from 53s. 3d. to 48s. A considerable business has also been done in mining shares which are not quoted. In insurance shares there have been very few changes. North British and Mercantile have risen from 35½ to 39, and British and Foreign Marine from 24½ to 25½. Bank shares unaltered. Some business has been done in oil shares, but the prices show scarcely any change.

ERRATUM.—In our "South Australian Letter," published on May 4, our correspondent stated that Mr. F. C. Cloud, of the Wallaroo and Moonta Mining and Smelting Company, was a Fellow of the Geological Society. Mr. Cloud writes to say this is an error. He has the honour of being an Associate of the Royal School of Mines, a Fellow of the Institute of Chemistry, and a Fellow of the Chemical Society, "but," he says, "I do not feel myself qualified to ask for Fellowship to the Geological Society."

* From the Engineering Magazine for August.

MEETINGS OF MINING COMPANIES.

BRITISH EXPLORATION COMPANY, LIMITED.

Subsidiary companies to be floated.

THE statutory general meeting of the British Exploration Company (Limited) was held on Monday, at Winchester House, Old Broad-street, E.C., Mr. STANLAKE LEE (the Chairman) presiding.

The SECRETARY (Mr. D. Owenstone) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—As you are aware, this is what is commonly called a statutory meeting, it being held in compliance with the Companies Acts within four months of the incorporation of the company. Although it is about four months since the incorporation of its capital, and during that short period the directors have been incessantly engaged in arranging all the details connected with putting the company on a systematic basis for active operations. With regard to the issue of capital for public subscription by this company, I am pleased to say that the issue was well received; so much so, that after having made the cash payments required in purchasing from the vendors such of the properties as were deemed most valuable to the company, which, upon their resale to subsidiary companies, will leave to this company a cash and share return of about £110,000, we still have a cash working capital of over £20,000 in hand, with £55,000 unissued. The total nominal capital issued is £95,000, and this is held by 235 shareholders. As an evidence that the directors have not allowed the grass to grow under their feet during the three weeks which have elapsed since the allotment of shares in the company, I may say that we are about to make an immediate issue of our first subsidiary company, which has been formed to acquire certain gold mining claims from us in the Heidelberg district of the Transvaal. The claims are situated on the famous Nigel reef, which enters our property on its southern boundary, dips right through it from south to north, running along its whole length from east to west, the area of the property being some 4,140,000 square feet. One of the three reefs on the property is said to be 10 feet in width. From all we can ascertain, the opinion is unanimous that we possess a very valuable property, and one which will do our first subsidiary company great credit. As it is one of the provisions of our prospectus that shareholders in this company have a prior right of allotment in the issues of any of our subsidiary companies, an advance prospectus of this first issue will be sent to each shareholder in the course of a few hours. With regard to another of our properties, I may say that it has been well reported upon and strongly endorsed by a Government inspector of mines acting for and on behalf of his Government. It is well equipped with a fine crushing plant and cyanide works. Its area is some 248 acres of mineral lands, with three distinct lodes, assays of samples taken on behalf of the Government ranging from 3 ounces to 14 ounces of gold per ton. The lands are held free from all Crown taxes or royalties whatsoever, and free from any conditions as to labour requirements. It is our intention to transfer this to a subsidiary company also, and to issue the same very shortly. Other good business is also before us, and we have requests to make issue of various undertakings for other parties at no expense to ourselves, but for a remuneration satisfactory and profitable for the work undertaken. One of such issues will also shortly be made. Considering the fact that we have not been in office one month, I am sure you will not expect me to be able to give you any further information, but will permit us to return to the duties so recently imposed upon us in order to carry out some of our good intentions, remembering that while it is no more given to us to command success than it is to others, we will, nevertheless, not be outdone by the efforts of others to endeavor to secure it. (Applause.)

Mr. ARTHUR TOOTH asked the amount of capital subscribed outside the directors.

The CHAIRMAN replied that it was £40,000.

Mr. ARTHUR TOOTH enquired why the meeting was called so early after the registration of the company.

The CHAIRMAN stated, in reply, that the directors were obliged to call the meeting within four months of the registration of the company, and as there was a certain amount of delay between the registration and flotation of the company, the four months had expired.

A vote of thanks was given to the Chairman and directors, and the proceedings terminated.

LIMERICK GOLD MINES, LIMITED.

Statutory meeting.—Favourable reports.

The statutory meeting of this company was held at the offices of the company, Lendenhall-buildings, yesterday.

Mr. G. W. BREW (secretary) having read the notice convening the meeting.

Mr. J. LOWLER, M.P., who presided, said that this meeting, as they were aware, was necessary owing to the period which had elapsed since their company was registered. The three leases forming the property—the Lost Chord, Nonpareil, and Limerick—were purchased from the Yilgarn Prospecting Syndicate (now the Yilgarn Exploring Company, Limited), whose Australian members were among the best known and most trusted mining men on the field. Their confidence in the property was such that they not only took the great proportion of their purchase money in shares, but were watching the interests of the company by directing the development of the mines on the spot. He was glad to say those developments were proceeding most satisfactorily, and the richness and strength of the lodes were established beyond doubt, no less than ten well-known experts—including Mr. Zebina Lane, of the Great Boulder, and Captain Matthews of Bayley's Reward—having reported on this or an immediately adjoining properties on the same line of reef. All agreed in testifying to the permanent character of the reefs, to their richness, and to the exceptional facilities for cheap working in the shape of abundance of water and fuel. They had, however, got beyond the report stage, for they had vigorously developed the property themselves, and every shaft they had sunk and every assay that had been made more than confirmed their most sanguine anticipations. By the mail to hand on Monday last, the superintendent reported: "I am glad to say the mine is looking well, on the Chord especially, some splendid stone having been raised, estimated to run 8 ounces to the ton. The pyrites in the ore below water level has been found to carry a considerable quantity of gold. Two shafts have been sunk lately to water level on the Nonpareil, and in both the reef is showing very strong and well defined. We are more than ever convinced of the value of the property. The Golden Plam and Glasgow Companies have also a good show, and this has sent the prices of other blocks along the line up to the skies." Still later, and, if possible, more favourable, information was received by cable on Saturday last: "Have struck good ore in the Nonpareil 9 feet in width.—Lost Chord. The ore is very rich, assaying 7 ounces per ton. Developments opening up splendidly. Many enquiries for shares." The Chairman stated that the directors had concluded a contract on very favourable terms for crushing not less than 1500 tons of ore on the surface of the Nonpareil, and as that ore, wherever tested, had never assayed less than 3 ounces per ton, almost immediate returns might be looked for. Assuming the yield to be three ounces, the net result, after paying cost of treatment and handling, would be from £10,000 to £12,000. In addition to the ore on the Nonpareil, they had the rich stone in the Chord and the Limerick leases, so the directors anticipated large earnings in the immediate future. As they were aware, the directors had not gone to the public, having determined, with the willing concurrence of the vendors, to

thoroughly test the property before doing so. The vendors and promoters had spent a considerable sum on the properties with the satisfactory results already stated, so that when they made a public issue—if they did do so—they would be able to offer a property of proved value and with handsome dividends in sight. He could wish, for the sake of West Australia, and the investing public, too, that the course adopted by the directors of the Limerick was universally adopted. An additional source of satisfaction was the fact that their property was lightly capitalised (£75,000), and that £20,000 had been reserved for working capital. He thought that the small body of shareholders he saw before him might go away from the meeting perfectly content with the anticipation that when they next met it would be to pass substantial dividends, and to congratulate each other on possessing one of the most valuable and profitable properties yet handled in Western Australia or elsewhere. (Cheers.)

In reply to a SHAREHOLDER, the CHAIRMAN said that although they had made no public issue, they had received some subscriptions privately, and had other applications before them. He thought he might say on behalf of the directors that they would consider applications to a limited amount, but they fully believed that if they made any public issue later, it would be under such conditions that the shares would command a substantial premium on their merits.

A vote of thanks to the Chairman and directors concluded the proceedings.

NORTH BOULDER GOLD MINING COMPANY, LIMITED.

The property favourably situated.—Some promising assays and crushings.

The first ordinary general (or statutory) meeting of shareholders in the North Boulder Gold Mining Company (Limited) was held on Wednesday, at Winchester House, the chair being occupied by Mr. HENRY DUNCAN.

The SECRETARY (Mr. J. Whittaker) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is the occasion of the first general meeting, generally known as the statutory meeting, of your company. The directors have deemed it desirable to call it at this early period in order to make a full explanation of their position to the shareholders. You are aware that the floating of the company was practically assured by private arrangements. It was not found necessary to appeal to the public in any way, and we are pleased to say that the result has been most gratifying, and has amply justified the adoption of this course. Still, the absence of the conventional prospectus as a document of reference has its disadvantages, and it is for the purpose of meeting and providing against any eventually arising from this course that you have been called together earlier than would otherwise have been necessary. You, no doubt, know that our almost next-door neighbour, the Great Boulder Proprietary Gold Mines Company (Limited) has remonstrated by letters, not only to the board, but to the Press, against our having been registered as the North Boulder Gold Mining Company (Limited). That any one company can claim a monopoly of the name of Boulder, particularly when the seat of its operations is in a district which is now commonly known by that name, cannot be for a moment admitted, and all we need say is that to their demand that we should alter the name of the company, the board have through, and by the advice of their solicitors, Messrs. Harwood and Stevenson, respectfully declined to accede. The directors who, of course, received their appointment after the certificates of registration of the company had been issued, are quite satisfied with the name which is conferred by the document, and they will certainly not seek to go behind it, unless for some stronger reasons than those which have been advanced by the Great Boulder Company—or rather, to give them their full title, the Great Boulder Proprietary Gold Mines (Limited). The founders of the company were not only justified, but, we think, they should be complimented, on having selected so appropriate a name. But after all, as a celebrated author has said, "What's in a name? A rose by any other name would smell as sweet." What we wish to be assured of, then, is that by whatever name it is called our property is really a good and promising one, as we shall see, and that there is a fair prospect and possibility of its proving a not contemptible rival of its near but rather quarrelsome neighbour. But this only leads to a point of more importance, and that is to make it clearly known, notwithstanding the imitations which may have been made to the contrary, that the North Boulder is situated within the charmed circle in which the Great Boulder itself is certainly situated. Now, I have examined the map and, although it is not drawn to scale, I think the fact will not be disputed that our property lies to the north—perhaps very slightly to the east—of the Great Boulder, and certainly not more than one-third of a mile distant from it, and within easy range of the sound of its stamps. The North Boulder property consists of two leases—one of 9 acres, and one of 10 acres—both of which, we learn by cable, have been duly recorded in the company's name. Two distinct reefs run through the entire length of the 9 acre lease, and sufficient work has been done to determine their nature, quality, and course. There are three shafts sunk on the property. In No. 1 shaft the reef at 20 feet when it was reported on was 3 feet wide all the way down, carrying gold the whole way, and improving in depth. Assays from bottom of shafts were over 50 ounces to the ton, and the lode had every appearance of permanency. In No. 2 shaft at 10 feet the same line of reef showed 18 inches in width and assayed 54 ounces. In No. 3 shaft at 15 feet on a different reef the assay was 39 ounces. Sinking in these shafts has been proceeding since the date of the above examination. The result of our first crushing of 14 tons, which has just been announced, is 5 ounces to the ton, which we regard as highly satisfactory. (Hear, hear.) A cable despatch has been received this morning to the effect that a second crushing of 23 tons of stone is being proceeded with, and that the plates look excellent. We hope to be able to announce the result in due course. Everything seems, therefore, to indicate that your property is a remarkably rich one, and, although I would venture upon this comment, you have ample means of judging for yourself from the facts which we have been enabled to lay before you. The relative position of the North Boulder with other mines should, I think, alone justify you in arriving at a favourable opinion. It immediately adjoins the Bank of England and Iron King, which in turn adjoin the Royal Mint. To the north about 1 mile is the Oroya, and in the same direction, but only 100 or 200 yards distant is the Oroya, who have just had a first crushing that produced 8 ounces to the ton; while 250 yards distant, and north of the Oroya from us, is the Iron Duke. To the south-eastward, not a ½ of a mile distant, is the Royal Mint. To the south at about the same distance is the Golden Link and the Lake View, with its record of 3865 ounces in five months, to the south and west the Great Boulder itself, the formidable Goliath of the district whose name it bears with its 9 ounce ore and three months' record of over 5000 ounces; also the Great Boulder Extended and the Ivanhoe. Situated in the very centre of such a galaxy of gold mines and phenomenal reefs, ranged as they are around us at nearly every point of the compass, Nature would indeed be strangely fickle were she to deny us a small portion of the favours that she has so lavishly bestowed upon our neighbours. We shall, therefore, hope from time to time to report the progress of the mines and further crushings if the public will not be too busy to undertake them. Efforts in this direction can never be quite satisfactory until we have our own mill, the procuring of which we have at present under consideration. In conclusion, I can only say that we have every reason to believe that our property, if properly worked, will give such returns that we shall be able to rank with the best of the Boulder companies. In this opinion we are backed up by well-known engineers of good repute, and it certainly will not be the fault of your board if we are not at an early date in the dividend-paying

list. We sincerely trust that the objects in calling this meeting will be attained, and that the particulars and explanations afforded will be satisfactory to all concerned. (Applause.)

A SHAREHOLDER: When do you expect the next crushing?

The CHAIRMAN: As I have announced, a telegram received this morning stated that 23 tons were in course of being crushed, and that there was every appearance that this was going to turn out well. Of course, we can have no definite announcement of the actual return yet, but when we get it we shall be very pleased to announce it to the public.

A cordial vote of thanks to the Chairman and board, moved and seconded from the body of the hall, was carried unanimously.

The CHAIRMAN having briefly acknowledged the vote, expressing the hope that there would soon be good news to communicate to the shareholders, the proceedings terminated.

HEIDELBERG GOLD MINES, LIMITED.

Some good discoveries on the property.

The first ordinary general meeting of the shareholders of this company was held on Wednesday, at the offices of the company, 32, Great St. Helen's, E.C., the Chairman of the company, the Right Hon. Lord DE L'ISLE and DUDLEY presiding.

The SECRETARY having read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is the statutory meeting of the company required by Act of Parliament, and is, therefore, quite a formal one, and I will not detain you by making any long speeches. As this is the first time I have had the pleasure of meeting you all together, I wish to congratulate you on the prosperous outlook before you. Recent reports which we have had from your property have more than confirmed the good opinion which we had formed of it, as in addition to the very valuable reefs which had been proved to traverse the property when the company was first formed to take it over, it has since been ascertained beyond doubt that the main (Witwatersrand) reef passes through it, which fact alone places the property amongst those of the first rank in the Transvaal, besides which a valuable seam of coal of excellent quality has been discovered which should prove a source of no inconsiderable revenue. Work is being pushed forward in the most energetic manner, and as you will be doubt have seen from a report which was recently published, three shafts are being sunk, in each of which, as our manager has already stated, the reef shows up splendidly. I will now ask Mr. Webster, our local director, who has recently come from the mines, and who is happily present at this meeting, to address you briefly regarding your property.

Mr. JOHN WEBSTER, M.A.L.M.E., then said: I have pleasure in confirming all that your Chairman has just said, and I am glad to be in a position to give you a few further particulars. The property consists, as you are probably aware, of no less than 2250 acres, and was specially selected for its wonderful natural advantages, the reefs being peculiarly rich and easy to work, and the three shafts at present in course of sinking give excellent promise. Thousands of tons of ore, averaging about 2 ounces to the ton, can be obtained with very little sinking, and Nature has furnished all other requisites, water and fuel being in abundance, and excellent coal in large quantities can be easily obtained on your own property. I may mention that several subsidiary companies can be formed with much advantage, and there is ample room for the lucrative employment of capital in opening up the resources at your disposal. I am aware that offers have already been made to the company for the acquisition of claims on the Heidelberg, and may state that I have recommended the board not to close with any offer at present, as in my opinion it is more advisable to first further develop the reefs and the coal, when I have not the slightest doubt the value of such claims will be enhanced three-fold. The railroad from Natal to Johannesburg passes through the centre of your property, and this I need not point out is a very considerable boon to your company, as it will give special facilities for cheap transport, and enable them to supply the town of Heidelberg and the adjacent mines with coal at many shillings per ton less than any other colliery in the district.

One or two SHAREHOLDERS having asked a few questions, a vote of thanks was passed to the Chairman for presiding, which was suitably acknowledged, and the proceedings terminated.

[COMMUNICATED]

E. W. TARRY AND CO., LIMITED.

The company successfully floated, and the prospects encouraging.

A statutory general meeting of the shareholders in this company was held on Thursday, at Winchester House, the chair being occupied by Mr. THOMAS RUDD.

The SECRETARY (Mr. H. D. Boyle) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—As you are aware, unfortunately at the last meeting there were not enough shareholders present to form a quorum, and, therefore, we were obliged to postpone the meeting until the following week. We had no idea that this would have happened, or we should have taken steps to prevent it. This is merely a statutory meeting, called to fulfil the requirements of the law, and there is not much to tell you beyond that the company has been successfully floated, and that its prospects seem good. Orders have been coming in, and during the past few months they have been increasing, while everything in connection with the company looks very prosperous. We hope that our friends on the other side will see their way shortly to open branches in Rhodesia, where there will be a large demand for mining tools and everything this company supplies, and where we ought to make increased profits. We are looking forward to that very much. As the company was taken over as a going concern from August 31 last year, profits are already made to a considerable extent, so that we hope we shall be able to declare a dividend before very long. We have just received a cable stating that the properties are in course of being transferred, so that everything will be completed almost immediately. That is all I have to say upon the present occasion, but I hope we shall have very good news to give you in course of time.

The proceedings then terminated in the ordinary manner.

GREAT BOULDER.—A remarkably rich development has taken place in the Great Boulder mine. In cross-cutting west at the 110 feet level an entirely distinct reef has been struck some distance from and running parallel with the main line. The new lode has been penetrated for a distance of 6 feet. It is in appearance similar to the main lode, and is full of coarse gold, the faces glistening like a jeweller's shop. The face of the crosscut is still in the lode formation, and its width is unknown, save that it has been proved for 6 feet. The find has created a good deal of excitement in the district.—*West Australian Gold Fields Courier.*

WHITE FEATHER.—Many tons of machinery have long ago been landed on the White Feather Reward Claim, and a good deal of that machinery is now in position. The poppet heads are up, and have a majestic appearance, as well as gladdening the hearts of many. In a very short time the winding engine will be worked. The three shafts on the lode will be connected by drives at the 100 feet level. Altogether splendid work is being done on this mine, and Captain Smith and his staff and company deserve great credit for the energetic way they have pushed on the work of opening up the mine right from the jump.—*Western Argus.*

THE LYDENBURG (TRANSVAAL) GOLD EXPLORATION COMPANY (Limited).—Capital, £150,000, in 150,000 shares of £1 each. PRESENT ISSUE, £20,000, in 20,000 shares of £1 each, payable 5s. on Application, 15s. on Allotment.**DIRECTORS.**

Nice Brown, Chairman Transvaal Gold Exploration and Land Co. (Ld.).
Major-General A. C. Bruce, C.B., Director Transvaal Gold Exploration and Land Co. (Ld.).
C. E. Dobson, Director Libson Berlyn Co. (Ld.).
W. M. Farmer, Director Transvaal Gold Exploration and Land Co. (Ld.).
F. C. H. Iland, Director Libson Berlyn Co. (Ld.).
BANKERS—The National Bank of the South African Republic (Limited),
73, Cornhill, London, E.C.

SOLICITORS—Ingle, Holmes, and Sons, 20, Threadneedle Street, E.C.
AUDITOR—William Neil, Chartered Accountant, 35, Walbrook, E.C.
SECRETARY AND OFFICES (pro tem.)—A. R. Gillham, 35, Walbrook, E.C.

ABRIDGED PROSPECTUS.

This Company has been formed to acquire, explore, and develop the farms of Kladoutien, Claremont, Wakkers Dal, Brandry, Klipfontein, Koot, Koot, Koot, and Koot, situated in the valley of the Elyde, in the district of Lydenburg, Transvaal. The whole of the farms lie at the junction of the Lydenburg, Transvaal, and the Orange Rivers. The Ohrigstad River runs through the farms. Klipfontein, Koot, Koot, and Koot, being about ninety miles from the property. The Lydenburg River, when completed, will be the nearest railway at present is that from Delagoa Bay, being about ninety miles from the property. The Lydenburg River, when completed, will be the nearest railway at present is that from Delagoa Bay, being about ninety miles from the property.

From the indications obtained from work done on other properties in the district, the whole of the country for many miles around is believed to be of the same geological formation as that to the south.
Very little prospecting as yet has been done over these farms, which contain about 72,000 acres (as so described in the deeds) in one block, a territory nearly equal to the area of the County of London, and as will be seen from the map accompanying the Prospectus, much larger than any other property now being worked by any one company in the Lydenburg district.
The purchase price of the property is £120,000, which the Vendors have agreed to take in fully-paid Shares of the Company, thus leaving 30,000 Shares, the amount of the present issue, available to provide for working capital. But the present Directors are of opinion that this provision might be inadequate, and the Vendors have made arrangements to contribute a further sum of £20,000 for this purpose.

The following contracts have been entered into:—

(1) An agreement dated the 11th of October, 1894, between the Mines Contract Company (Limited) of the one part, and Harold Walters for and on behalf of this Company of the other part.
(2) An agreement dated the 22nd of November, 1894, between this Company of the first part, the Mines Contract Company (Limited) of the second part, and Harold Walters of the third part.
(3) An agreement dated the 8th of August, 1895, between this Company of the first part, the Mines Contract Company (Limited) of the second part, and Charles Brook Dobson and Alfred Edward Ann of the third part.
Applications for Shares should be made on the form accompanying the prospectus, and forwarded to the Company's Bankers, accompanied by a remittance of 5s. per Share.
If no allotment be made the money will be returned in full.
If less Shares be allotted than applied for the surplus will be credited in reduction of the amount payable on allotment.
The agreements and the memorandum and articles of association can be inspected at the Offices of the Solicitors to the Company.
Full prospectuses and forms of application for shares may be obtained at the Offices of the Company, and from the Bankers and Solicitors.
London, 9th August, 1895.

REPORTS FROM THE MINES.

FORTUNA.—Mine report dated July 31: Canada Inco mine. In the 110 fathom level driving west of Sand Pedro's shaft the lode has a promising appearance, and is valued at $\frac{1}{2}$ ton per fathom. —Juanito's mine sinking below the 100 fathom level. The lode continues regular and compact, and is valued at $\frac{1}{2}$ ton per fathom. —Los Salidos mine. Fair progress has been made in the driving of the 212 east of Taylor's engine shaft. In the 200 east of the same shaft the lode is small and unproductive.

LA YESCA.—The directors not having been satisfied for some time with the nature of the reports received from La Yesca, arranged with Mr. Arthur L. Pearce, F.G.S., M.Inst.M.M., 13, St. Helen's-place, E.C., our consulting engineer, to visit and report on the mine. Mr. Pearce has now returned to England and reports as follows: That in consequence of the failing health of the manager, Mr. Smith, he found it advisable to substitute Mr. Miller, who for some time past had in reality been carrying on the work at the mine. Mr. Miller had been resident in Mexico some 12 years, and being thoroughly conversant with the language and customs of the country, is well fitted to conduct the business. There are two lodes in the San Miguel mine, which he advises should be opened up to ascertain their real value. Surface workings prove that the former workers extracted a large quantity of ore from these lodes. In the Zapopan, at the time of his visit, in consequence of the wet season, the workings below the main tunnel were under water. Above the level of the tunnel the lode has been almost worked out of high grade ore. From the extreme power of the lode, and evidence of the extensive old works together with the known value of ore extracted it may be assumed that good ore will be found below the water level. The lower workings should at once be drained by means of hand pumps, as being the most speedy and inexpensive, when there should be no difficulty in extracting sufficient ore to keep the mill going and of a higher grade than can be expected from the old workings. Meanwhile arrangements for permanent drainage by means of a deeper tunnel and power pumps for next wet season should be provided. There is no doubt when the ore bodies below the present level are properly attacked that ore will be found of a grade which, when selected, will be of sufficient value to ship rather than mill—that is, ore of 200 ounces per ton and upwards. Shipping is advisable in the case of high-grade ores. Zapopan also carries an additional gold value which would be paid for when shipped, but would not be taken into account if sold locally. Assays show the gold contents in this mine as approximately 5 dwts. to a ton of 2000 lbs., in addition to the silver. A trial crushing of 33 tons of lode-grade ore was made, but owing to the fact that the mill was not completed and the best mode of treatment not thoroughly ascertained, an extraction of 44 per cent. only was obtained; this may be expected to be much increased in future crushing. Properly opened and equipped with the necessary plant he has no doubt that this mine can be a steady and profitable producer.

LINEARES.—Mine report dated July 31: Pozo Ancho mine. Peill's engine shaft. In the 200 fathom level driving south the men continue to make very satisfactory progress. The lode in the 200 west continues regular, but is unproductive at present. In the 155 west the lode looks promising, but only turns out occasional stones of ore. The lode in the 178 west of Warner's crosscut is large and open, and produces good lumps of ore, being valued at $\frac{1}{2}$ ton per fathom. No. 278 winze below the 130 fathom level is opening out good stopping ground, worth $\frac{1}{2}$ ton per fathom. The stopes are yielding well. Surface works are being carried on very regularly, and the machinery is in good working condition. Estimated raisings for August 200 tons. The tributers' return amounted to 136 $\frac{1}{2}$ tons of ore in the past month. —Los Quintientos mine. Taylor's engine shaft. In the 185 east the lode is chiefly composed of spar, and the granite is hard. The 165 east continues to lay open a splendid lode, valued at 4 tons per fathom. The lode in the 150 east is very large, but contains little ore at present. In the 130 east the lode is large, but is of no actual value. Estimated raisings for August, 150 tons. The tributers returned 53 $\frac{1}{2}$ tons of ore in the past month.

TAMWORTH GOLD.—Under date of June 28, Mr. A. Ballantyne the company's manager, writes as follows:—It gives me great pleasure to inform the directors that the drive started on the reef was proved successful in finding quartz carrying free gold. There are 20 men employed on the grade and in the mine, and more will be put on whenever they can work to advantage. Future development alone can establish the value of the property, but I am satisfied that it will be a paying mine. The machinery has arrived and is being erected.

MYSORE WEST AND MYSORE-WYNAAD CONSOLIDATED.—Tank Block. The mining manager telegraphed on August 3 as follows:—The mill ran 584 hours, and crushed 400 tons of ore, which yielded 306 ounces of gold.

(REPORTS FROM THE MINES CONTINUED ON PAGE 959.)

EXPORT AND IMPORT TRADE.**THE BOARD OF TRADE RETURNS—JULY TABULAR STATEMENT.**

Specially compiled for "The Mining Journal" from the Board of Trade Returns.

THE Board of Trade Returns for the month of July show that the Imports amounted to £25,122,147, against £31,255,553 for the same month of 1894, being an increase of £6,133,406. The Imports for the seven months ending July 31 were £238,801,680, against £242,856,918 for the corresponding period last year, a decrease of £4,055,238. The Exports for July totalled £20,559,466, which, compared with July, 1894, shows an increase of £2,160,950. The Exports for the past seven months show an increase of £1,394,991, being £126,677,007, against £125,282,016 for the same period 1894. The Exports of Foreign and Colonial merchandise were £4,789,351, against £4,389,764, an increase of £399,587, and for the first seven months £35,021,705, against £35,943,653, an increase of £921,948.

EXPORTS—SUMMARY OF INCREASES AND DECREASES.

PRINCIPAL AND OTHER ARTICLES	QUANTITIES.		VALUES.	
	INCREASE.	DECREASE.	INCREASE.	DECREASE.
Raw Materials:				
Coal and Steam Fuel ... Tons	450,719	—	55,922	—
Coal, &c., shipped for steamers' use ... Tons	77,819	—	—	—
Metals:				
Brass, and manufactures of	—	850	399	—
Copper, unwrought and wrought ... Cwts.	14,408	—	35,759	—
Hardware and cutlery	—	—	11,831	—
Implement and tools, and parts thereof	—	—	14,692	—
Iron, unwrought and wrought ... Tons	57,764	—	288,370	—
Lead, pig, rolled, &c.	—	1,135	5,328	—
Plate, and plated gilt wares & telegraph wires, &c.	—	—	6,271	—
Tin, unwrought ... Cwts.	720	—	135	—
Zinc or Spelter ... Tons	—	550	410	—
OTHER ARTICLES	—	—	5,425	—
Total	—	—	353,292	227,390
Machinery:				
Steam engines	—	—	14,265	—
Other descriptions	—	—	50,581	14,265
Total	—	—	14,265	50,581
ALKALI ... Cwts.	57,591	—	—	512
CEMENT ... Tons	4,557	—	4,405	—
PRODUCTS OF COAL ... Tons	—	—	32,699	—

EXPORTS—BRITISH AND IRISH PRODUCE.

PRINCIPAL AND OTHER ARTICLES	QUANTITIES.		VALUES.	
	Month ended July 31.	Month ended July 31.	Month ended July 31.	Month ended July 31.
	1894.	1895.	1894.	1895.
	Cwts.	Cwts.	£	£
Metals and Articles Manufactured therefrom (except Machinery):				
Brass, and Manufactures of, not being Ordnance	10,170	9,290	36,993	37,392
Copper: Unwrought, in Ingots, Cakes, or Slabs, and Precipitate:				
To Germany ...	9,783	15,483	21,336	29,838
"Holland ...	7,060	10,332	14,989	22,254
"Belgium ...	2,115	2,420	5,023	5,421
"France ...	1,869	9,423	3,957	21,759
"Italy ...	3,264	747	7,236	1,805
"British East Indies ...	40	63	81	129
"Other countries ...	4,749	8,543	9,931	18,905
Total	29,088	45,293	62,453	101,121
Wrought, or Manufactures, Unenumerated:				
To Sweden and Norway ...	1,052	909	2,967	2,792
"Germany ...	235	550	875	1,568
"Turkey ...	3,883	2,896	7,798	7,349
"Egypt ...	1,655	858	4,145	2,113
"Brazil ...	1,580	1,537	4,303	4,189
"British East Indies ...	7,031	5,239	18,860	12,578
"Australasia ...	938	1,519	4,855	4,587
"Other countries ...	6,070	7,233	17,913	20,376
Total	22,224	20,451	58,786	55,549
Mixed or Yellow Metal:				
To China and Hong Kong ...	3,338	856	6,638	1,815
"British East Indies ...	7,013	9,810	14,041	19,601
"Other countries ...	5,976	5,629	13,746	13,337
Total	16,327	16,295	34,425	34,753
Total of Copper	67,637	82,045	155,664	191,423
Implement and Tools, and parts thereof	—	—	93,494	108,189
Hardware and Cutlery	—	—	143,464	155,235
Iron and Steel: Pig iron:				
To Russia ...	16,763	24,746	43,217	54,262
"Sweden and Norway ...	4,545	3,071	9,271	6,313
"Denmark ...	2,689	2,442	3,451	2,850
"Holland ...	22,839	24,591	47,052	47,446
"Belgium ...	16,431	8,904	36,863	19,192
"France ...	2,634	2,778	7,728	8,182
"Portugal, Azores, & Madeira ...	3,329	4,283	8,936	9,767
"Spain and Canaries ...	1,084	825	2,242	1,726
"Italy ...	1,911	308	5,598	1,465
"United States ...	7,816	8,135	18,463	19,472
"Australasia ...	779	2,484	5,518	17,438
"British North America ...	1,600	3,205	7,322	7,738
"Other countries ...	859	1,724	2,311	5,186
Total	66,741	92,491	206,876	213,180
Bar, angle, bolt, and rod	8,835	14,697	56,524	82,075
Railroad of all sorts	32,757	47,343	138,427	199,587
Wire, iron and steel &c.	2,689	2,442	4,670	5,715
Hoops, plates, boiler plates, &c.	10,236	12,504	90,994	112,824
Galvanized sheets	13,448	18,472	153,658	190,882
Cast and wrought iron, &c.	21,251	25,196	282,967	322,002
Old, for re-manufacture	7,703	15,057	20,476	38,522
Steel, unwrought	17,982	17,058	172,159	179,222
Black plates for tinning	—	3,338	—	37,634
Manufactures of steel, or of iron and steel combined	918	1,581	42,231	48,003
Total of iron and steel (including tin plates and sheets)	228,478	280,762	1,526,448	1,814,818
Tin Plates and Sheets:				
To Russia ...	46	5,027	513	55,411
"Germany ...	421	285	5,267	3,669
"Holland ...	438	547	5,601	6,872
"France ...	1,036	670	11,760	9,152
"Portugal, Azores, and Madeira ...	201	226	2,418	2,729
"Italy ...	268	83	4,565	951
"Rumania ...	426	305	5,552	3,646
"United States ...	17,805	16,445	218,137	188,318
"Brazil ...	621	336	6,091	3,681
"Argentine Republic ...	147	222	1,813	2,316
"British East Indies ...	580	815	7,322	9,532
"Australasia ...	817	1,738	10,394	20,707
"British North America ...	1,382	1,213	15,987	13,508
"Other countries ...	1,692	1,656	21,468	21,680
Total	25,910	29,768	317,876	340,772

PRINCIPAL AND OTHER ARTICLES	QUANTITIES.		VALUES.	
	Month ended July 31.	Month ended July 31.	Month ended July 31.	Month ended July 31.
	1894.	1895.	1894.	1895.
	Cwts.	Cwts.	£	£
Lead: Pig Sheet, Piping, and Manufactures:				
To Russia ...	2,376	1,528	22,222	15,919
"Germany ...	135	147	1,270	1,561
"China and Hong Kong ...	532	209	4,999	2,345
"Japan ...	28	131	405	1,745
"United States ...	3	628	63	5,151
"British East Indies ...	400	277	8,427	5,528
"Australasia ...	42	75	491	875
"British North America ...	209	280	1,360	3,014
"Other countries ...	1,336	550	13,501	6,773
Total	5,061	3,925	50,348	44,020

BRITISH AND IRISH PRODUCE—Continued.

PRINCIPAL AND OTHER ARTICLES	QUANTITIES.		VALUES.	
	Month ended July 31.	Month ended July 31.	Month ended July 31.	Month ended July 31.
Plate and Plated & Gilt Wares:				
Telegraphic Wires, & apparatus connected therewith ...	—	—	11,133	28,104
Tin, Unwrought:				
To Russia ...	Cwts.	Cwts.	£	£
"Sweden and Norway ...	3,315	2,583	12,619	8,763
"Germany ...	276	286	1,003	933
"France ...	793	704	2,838	2,344
"Turkey ...	1,193	1,175	4,69	3,802
"United States ...	589	280	2,189	964
"British North America ...	100	545	360	1,933
"Other countries ...	687	816	2,227	2,787
Total	2,611	4,011	9,198	13,619
Zinc or Spelter: Unwrought and Wrought	14,216	14,266	9,263	17,279
Total of Principal Articles	—	—	2,375,706	2,507,183
Other Articles	—	—	52,810	58,235
Total of Metals and Articles Manufactured therefrom (except Machinery)	—	—	2,428,516	2,565,418
Alkali ...	444,000	501,591	121,393	120,881
Cement ...	Tons.	Tons.	£	£
Products of coal (including paraffin, petroleum, &c.) ...	35,564	40,521	61,128	65,533
	—	—	77,904	110,603

MACHINERY.

PRINCIPAL AND OTHER ARTICLES	QUANTITIES.		VALUES.	
	Month ended July 31.	Month ended July 31.	Month ended July 31.	Month ended July 31.
Mining (Not Steam Engines):				
To Countries in Europe ...	—	—	2,921	1,782
"United States ...	—	—	118	121
"Countries in South America ...	—	—	867	2,851
"British Possessions in Africa ...	—	—	23,855	35,747
"East Indies ...	—	—	—	2,334
"Australasia ...	—	—	1,724	4,234
"Other Countries ...	—	—	4,703	5,269
Total	—	—	36,341	52,938
Total of Machinery other than Steam Engines	—	—	1,010,535	1,061,116
Total of Steam Engines	—	—	287,040	272,775
Total of Machinery and Mill Work	—	—	1,297,575	1,333,891

EXPORTS OF FOREIGN AND COLONIAL MERCHANDISE.

PRINCIPAL ARTICLES.	QUANTITIES.		VALUES.	
	Month ended July 31.		Month ended July 31.	
	1894.	1895.	1894.	1895.
	Tons.	Tons.	£	£
Copper:				
Unwrought and part wrought	693	460	28,997	21,639
Iron and Steel:				
Bar, angle, bolt, and rod	580	2,133	5,198	15,161
Steel, unwrought	74	271	725	2,158
Manufactures:				
Girders, beams, and pillars	32	35	159	411
Unenumerated				
	Cwts.	Cwts.		
	58,672	52,738	31,060	49,657
	Gals.	Gals.		
Petroleum	67,995	78,304	3,403	2,965
	Lbs.	Lbs.		
Quicksilver	163,674	255,532	12,120	23,850
	Cwts.	Cwts.		
Saltpetre	1,198	2,634	1,057	1,975
Tin, in blocks, ingots, bars, or slabs	24,801	47,789	110,736	100,068

THE LONDONDERRY MINE.

The report of the directors.—Should the vendors be prosecuted for fraud?

A REPORT of the directors was issued on Thursday evening, stating that they had thought it proper to await the return to England of Lord Fingall before calling the shareholders together to consider the matters affecting the undertaking. After reviewing the circumstances leading up to the receipt of the telegram from Lord Fingall reporting that "the rich chute of ore had opened very bad," the report alludes to Colonel North having communicated his intention of putting in trust for the benefit of the shareholders other than those holding vendors' shares, his share of the profits in connection with the sale to the company. Mr. Plunkett, holding Lord Fingall's power of attorney, said that he would not accept anything if the mine did not turn out better than his telegram would give reason to expect, and that he would not be behind Colonel North in his concessions. Mr. Myring also wrote that he intended to follow, so far as possible, the course adopted by Mr. Plunkett on behalf of Lord Fingall, so far as regarded his individual profits. The purchase from the Australian vendors was taken in the name of Lord Fingall alone, Mr. R. G. Casey and Mr. Myring having an interest with him in the matter, and Colonel North subsequently acquired an interest in the purchase by agreement with Lord Fingall. The report states that "Mr. Casey came to England in May last, and the board hoped that he would follow the example set by Colonel North, Lord Fingall, and Mr. Myring, but they regret to find that he is not disposed to do so. A question, moreover, arose—which has only recently been settled—as to what was Mr. Casey's interest in the sale, he at first claiming that it was a three-fifths interest, while the other vendors contended that it was only half that amount, and it is on the latter basis that he is now asking to have the accounts with his co-vendors settled. The deeds of trust to carry out the intentions of Colonel North, Lord Fingall, and Mr. Myring have been long since prepared, but it has been impossible to complete the trust and perfect the deed owing to the unsettled question as to the amount of Mr. Casey's interest, and also as to a few other outstanding questions on the account."

The directors proceed to state:—"Unfortunately, there is also one other outstanding matter, for it appears that when Mr. Casey arranged for the above-mentioned deposit of £30,000, he undertook that £100,000 out of the English vendors' shares should be retained until the other shares in the company have received 100 per cent. in dividends. Having regard to the disappointment caused by the receipt of Lord Fingall's telegram, the directors considered that some considerable sacrifices in favour of the company ought to be made by the Australian vendors, and they have been endeavouring to induce them to meet the company in this respect; but the Australian vendors insist upon having the balance (£116,667) of the vendors' shares forthwith allotted to them, and the directors are advised that the circumstances of the case are full of suspicion, but that it will be necessary to set up and prove a case of fraud against the Australian vendors, in order to successfully defend a claim to have the shares allotted. Under these circumstances, unless the shareholders desire that they should embark in litigation on the subject, the directors propose to comply with the vendors' requirements, and allot the shares accordingly."

Lord Fingall, who (as mentioned above) has now arrived in this country from Coolgardie, reports as follows:—

To the directors of the Londonderry Gold Mine.
Gentlemen,—I shall not deal with the unlooked-for and disappointing results of the opening-up of the "Golden Hole." Nothing that I can now say would throw any further light upon this subject, as you have long since had all possible details by post. I shall, therefore, confine my remarks to the actual state of the mine, and its prospects as they appeared to me at the time I left it on June 22. As, personally I have but little technical knowledge or practical experience of mining operations, any opinions I may express have been formed by collecting and sifting the opinions of persons better qualified to judge. The original "Golden Hole" was sunk down to the 50 feet level, and development work had been carried on vigorously. At the 100 feet level we had driven upon the course of the lode for some 400 feet, and had done other work, particulars of which are fully detailed in the manager's reports. At the 100 feet level, a little to the south of the "Golden Hole," we struck a patch of very rich gold. When I left they had followed its course along the floor of the drive for about 10 feet, and sunk 10 or 12 feet. Some 600 ounces of gold had been taken out from here at the time. At Colombo I learned by cable, dated July 8, that the vein then looked poor. In addition to this patch we have found other small ones, but they were few and far between, and practically amount to but little. With the exception of these, I regret extremely to have to say that the general run of the lode so far contains scarcely any gold at all. In speculating as to the future, our hopes must be rested upon two possibilities. We may come across other rich patches or pockets, or the general run of the lode may improve at lower depths. There are reasonable grounds for anticipating the former result from further development, but the patches or pockets must be either very numerous or very rich before they can make the mine a paying concern. With regard to improvement at a lower depth, that must be determined by further developments. At present, I believe, the main shaft is being rapidly sunk, and diligent exploration carried on at the higher levels. This course should, I think, be pursued for the present, but the hopes of ultimate success as expressed to me by your manager upon the spot are, I fear, but small. On the other hand, not only are the views expressed in the recent reports of Professor Nicholas and Captain Matthews strengthened by this 100 feet level find, but the general opinion of mining men on the spot (some of whom visited the mine in their private capacity), appears to be that where such rich gold was found upon the surface it is bound to exist lower down, and that it is only a matter of finding it. The question, therefore, appears to narrow itself to this. Is the chance worth the expense? I am of the opinion that the developments should be continued to lower levels. I do not consider that the erection of the machinery which the company has purchased would be justified until the mine has been further proved. I regret to have to inform the board that the outside blocks which the vendors gave to the company on account of the shortage in the acreage of the original claim have not, so far, proved to be valuable.

July 31. (Signed) FINGALL.
The directors, in conclusion, state that the amount of working capital in the hands of the company is about £30,000, but in case of need the money to be put in trust by Colonel North might be made available for the same purpose under the provision authorising its transfer unconditionally to the company. The directors "consider that the mine should be developed by further sinking so as to test the lode at a lower depth, and they trust that these further developments may result in the discovery of other rich deposits, such as have already been found, but in larger quantities, and that the mine may be found to answer the favourable expectations entertained by the mining

experts and others who all reported so favourably on the prospects on this property."

MARIE ROSE GOLD MINING COMPANY, LIMITED.

THE prospectus of the above-named company will, we understand, be issued at an early date. We have been favoured with an advance copy of it, from which we take the following particulars:—"The capital is fixed at £175,000, of which £50,000 is set aside for working capital. The property to be acquired is the block of claims locally known as Anderson's, with water right, machinery, works, buildings, and plant thereon. It is situated about 8 miles west of Johannesburg, on the farm Vogelstruisfontein, in the Witwatersrand district of the Transvaal; adjoining, on the east, the Union Syndicate claims, on the Farm Klein Paarde Kraal; on the west, Wood's claims, now known as the Bantjes South Gold Mining Company; and, on the north, the Rio Grande Deep Level claims. It is immediately south of the Bantjes Reef Gold Mining Company and the Aurora West United and Aurora Companies. The block consists of 67 mining claims, each 150 feet by 400 feet, including 13 claims on the line of reef, five claims deep, and stands about 6600 feet south of the Main reef outcrop on the Bantjes, Aurora, and Aurora West United Gold Mining Companies' grounds, as shown on the Government plan, with watertight, 10 stamp battery, turbine, buildings, houses, dams, &c."

"The reefs traversing the property are the well-known Marie Louise, Gordon, and Kimberley series. Besides these reefs, it is estimated by competent authorities that the Main reef series of reefs will be cut on the property to be acquired by the company at an easy mining depth—say, 1000 to 1100 feet."

"The Marie Louise reef has been opened up on the property and worked by the sinking of three shafts, No. 1 being 90 feet deep, No. 2 60 feet, and No. 3, by latest advices, 12 feet; and the reef being of an average width of 3½ feet, running due east and west, dipping to the south at an angle of 35°. The Gordon and Kimberley reefs upon the property have been opened up by the sinking of a series of prospecting shafts."

The following is an extract from the report of Mr. Charles W. Ogden, consulting mining engineer:—"A trial crushing of 300 tons (made by myself) of all the ore extracted from shafts, winzes, drives, &c., and some stuff, realised on new plates 7 dwts. 23 grains per ton."

"Reports have been made upon the property by Mr. Charles W. Ogden, Mr. John Farrant, and Mr. James Murray, which go to show that the company will acquire a property, which, in the opinion of the engineers who have reported upon it, is a valuable one, and should in the near future yield satisfactory returns."

"Judging by the character of the reefs where exposed, and the returns obtained by other companies working the same reefs, it may be assumed that with judicious and economic management, the future of this company will be satisfactory. The Main Reef Deep Levels should undoubtedly prove a valuable factor in the ultimate success and life of the mine. Mr. John Farrant says: 'The fact of your having a Main reef Deep Level through these claims at a depth of 1000 to 1200 feet is a sufficient guarantee of the success of your mine.'

"The application of the 'direct' cyanide process for the extraction of gold from the ore will receive the attention of the directors, as by it a considerable saving should be effected in the cost of treatment."

"The mine is a Deep Level mine in going order, and has three reefs running through the property."

JULY OUTPUT OF THE INDIAN MINES.

DURING last month the output of the producing mines in Mysore, India, was 20,797 ounces, showing an increase of 398 ounces as compared with the preceding month, and an increase of 4254 ounces as compared with the corresponding month of 1894. The production since the beginning of 1891 has been as follows:—

	1891.	1892.	1893.	1894.	1895.
	Ozs.	Ozs.	Ozs.	Ozs.	Ozs.
January ...	10,186	11,674	16,844	17,026	19,672
February ...	10,121	11,780	16,856	15,803	19,353
March	10,117	11,579	17,463	16,080	20,257
April	9,392	11,813	18,287	15,551	20,399
May	10,509	12,488	17,922	16,543	20,797
June	10,746	11,847	16,879	15,459	20,839
July	11,097	13,277	16,676	18,271	20,839
August	11,222	14,854	16,692	19,073	19,280
September ..	11,396	15,529	17,060	18,911	—
October ...	12,095	15,922	17,440	19,119	—
November ...	11,667	15,942	17,557	18,825	—
December ...	11,589	16,435	17,659	19,068	—

Total ... 130,137 ... 163,140 ... 207,135 ... 209,729 ... 140,602
The outputs of the individual mines for the past six months have been:—

	Feb.	Mar.	Apr.	May.	June.	July.
	Ozs.	Ozs.	Ozs.	Ozs.	Ozs.	Ozs.
Ooregum	5,382	5,533	5,608	6,046	6,012	6,039
Mysore	4,953	5,435	5,478	5,453	5,056	3,626
Champion Reef ..	5,638	5,610	5,645	5,651	5,910	6,008
Nandydroog	3,058	3,163	3,160	3,178	3,201	3,236
Coromandel	217	—	—	—	—	—
Nine Reefs	146	200	220	205	133	71
Balaghat	81	130	—	—	—	—
Mysore Reefs	90	—	128	—	236	—
Mysore W. and Wynad ...	—	156	160	264	—	—
Yerrakonda	53	—	—	—	291	306

* Not yet received.

Eaglehawk Consolidated Gold Mining Company.

We are informed that the shares in the Eaglehawk Consolidated Gold Mining Company (Limited) were largely over-applied for, applications from the colonies alone amounting to nearly 30,000 shares. Letters of allotment and regret have been posted.

New Chum Gold Mines (Limited).

The following circular has been issued to the shareholders of this company, signed, on behalf of the directors, by Mr. W. Harcourt Bustard (secretary):—"My directors have pleasure in informing you that the latest advices from the mines, both by mail and cable, are of the most satisfactory nature. The manager reports that 'the shaft has been sunk 500 feet, and we have now commenced driving on the lode. This is expected to give about 100 feet of backs for stoping, which should provide ore for continuous crushings for many months to come. The mullock heaps at surface have been let on tribute to local parties on very satisfactory terms.' Your directors are pleased to inform you that the Southern New Chum Company has been most successfully floated, thus securing for you a substantial profit in cash and shares, which should be an important asset to your company, the property sold being undoubtedly of great value, particularly in view of the amount of working capital available for its vigorous development."

The SUBSCRIPTION LIST will OPEN on MONDAY, 12th August, 1895, and CLOSE on TUESDAY, 13th August, for LONDON and COUNTRY.

THE HAWK'S VIEW GOLD MINING COMPANY, LIMITED,

WEALTH OF NATIONS LINE OF REEF, COOLGARDIE, WESTERN AUSTRALIA.

Incorporated under the Companies Acts, 1862 to 1890.

Capital, £80,000 in 80,000 shares of £1 each.

Of which 40,000 Fully-paid Shares will be allotted to the Vendors in full payment of the purchase consideration.

20,000 Shares are now offered for subscription.

PAYABLE AS FOLLOWS:

2s. 6d. on Application; 7s. 6d. on Allotment; and the Balance as required.

The whole of the 20,000 Shares offered for Subscription will be appropriated to Working Capital.

DIRECTORS.

LOUIS CAMPBELL-JOHNSTON, Esq., Chairman of the Matabeleland Adventurers (Limited); Director of the Rhodesian Mining and Finance Company (Limited); No. 1, Idlesleigh Mansions, Victoria Street, S.W.

OTTO STANGE, Esq., Director Anglo-German Exploration Co. of Western Australia (Limited), The Florence Gold Mine (Limited), Hannan's Oroya Gold Mining Co. (Limited), Oaklands, Honor Oak Park, S.E.

OLIVER HENRY DAVIS, Esq., C.C., Chairman of the Kangaroo Silver Mines (Limited), Director of the Walbi Silverton Extended Gold Mining Co. (Limited), and Director Walhi Grand Junction Syndicate (Limited), 28, Budge Row, Cannon Street, E.C.

CHARLES CLARK, Esq., Messrs. Chas. Clark and Co., Director Devon Gawton Co. (Limited), 20, Great St. Helen's, E.C.

BANKERS.

The CLYDESDALE BANK (LIMITED), 30, Lombard Street, E.C.

SOLICITORS.

Messrs. SNELL, SONS AND GREENIP, 1 and 2, George Street, Mansion House, E.C.

Messrs. PARKER AND PARKER, Perth, Western Australia.

BROKERS.

Messrs. JOHN GIBBS, SON AND CO., 31, Threadneedle Street, E.C. and Stock Exchange.

Messrs. T. AND M. T. STEEL, 135, Buchanan Street, and Stock Exchange, Glasgow.

Messrs. HOOK AND BRADSHAW, 4, York Buildings, and Stock Exchange, Liverpool.

AUDITORS.

Messrs. MONKHOUSE, GODDARD AND CO., Chartered Accountants, 28 and 29, St. Swithin's Lane, E.C.

MANAGING DIRECTOR IN AUSTRALIA.

HOD. W. O. HODGKINSON, late Minister of Mines, Queensland.

LOCAL AGENT.

H. R. BARRETT, Esq., St. George's Terrace, Perth, W.A.

SECRETARY AND OFFICES.

Mr. J. D. PATTULLO, 30 and 31, St. Swithin's Lane, London, E.C.

ABRIDGED PROSPECTUS.

This Company has been formed for the purpose of acquiring the following properties: Gold Mining Lease, No. 1040, area 12 acres 2 rods, known as Hawk's View; Gold Mining Lease, No. 1039, area 12 acres 2 rods, known as Sussex; Gold Mining Lease, No. 1612, area 8 acres 3 rods, known as Missing Link; and Block B, area about 12 acres, a total area of over 45 acres, situated 30 miles north of Coolgardie, Western Australia. The properties form the northern continuation of the Wealth of Nations lode, being with one slight interval a portion of a prolonged extension of gold bearing reefs extending from the Wealth of Nations shaft to Gold Mining Lease 1040, Hawk's View (vide Report).

The properties have been specially selected, after a careful examination, by the Hon. W. O. Hodgkinson, F.R.G.S., &c., late Minister of Mines for Queensland. Mr. Hodgkinson is well known as one of the gold mining authorities in Australia, having been for many years Gold Warden of important Gold Fields of Australia. His report has been further confirmed by Mr. Stone, Mining Engineer, who is well and favourably known in Australia as a reliable and careful mining engineer, and who examined the property independently of Mr. Hodgkinson, and also by Mr. George Davey, the Mine Manager of Lord Fingall's World's Treasure Mine.

For full Prospectus see Daily Papers Monday, August 12. Prospectuses, with full reports, can be obtained from the Company's Bankers, Brokers, or Secretary of the Company.

Applications for Shares should be made on Forms accompanying the Prospectus, and sent, with the amount of the deposit, to the Company's Bankers.

THE KILDONAN GOLD FIELDS.—After a three months' trial (see the Daily News) the Kildonan gold fields are now, by order of the Duke of Sutherland, shut against all comers. The experiment can hardly in any sense be termed a success. One miner, as the result of his three months' labour, cleared up from £18 to £20 worth of gold. Others managed to pay their way at most, but one or two did practically nothing. The more fortunate diggers are being offered more than market prices for their gold as a curiosity. It is not improbable that the Duke may renew the experiment on more favourable conditions, the miners having frequently protested against the restrictions which, they contended, were too prohibitive to give them fair play.

CAYLONA SILVER.—Mr. William Turner Stevens has been appointed secretary of the above company.

THE IRON TRADE.—BIRMINGHAM, AUGUST 8.—There was only a holiday market to-day, and in numerous instances mills and forges have not been restarted. Prices, however, showed an upward tendency. A meeting should have been held to-day of unmarked bar firms with a view to advancing prices, but owing to the absence of many makers the meeting was postponed until next week. Quotations are £5 5s. as a minimum. Pig iron for forge purposes was an improved enquiry, Northamptonshire and Derbyshire iron realising 39s. average, Staffordshire part-mine 40s., and Lincolnshire 41s. 6d. Foundry qualities were 5s. to 7s. 6d. a ton extra. Shows were in active enquiry for local consumption, and for export a £6 17s. 6d. for double average, delivered in the district.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

ALEXANDRA ESTATE AND GOLD.—The letters by last mail announce that the board of directors have under consideration the advisability of sinking one of the winzes on Nande's portion of the property a further distance of 100 feet, and that active work is expected to be recommenced on the property at an early date.

ANGLO-MEXICAN.—By advices dated June 25 the manager reports that: "The stopes continues to look as well as usual and to produce plenty of ore, giving us no difficulty in securing all that is required to keep the mill supplied to its full capacity. The mill continues to work splendidly crushing about 65 tons of ore per day."

BARRETT GOLD.—The manager reports that during the month of July only low-grade ore from "Rautenback" reef has been crushed, resulting in a return of 425 ounces of gold. The new tram line connecting "Bannister's" reef with the mill is being rapidly progressed with, and will probably be completed and working by the end of August, when crushing of the richer "Bannister" ores will be resumed.

BAYLEY'S REWARD No. 1 SOUTH.—The following cable, dated the 5th inst., has been received by this company's London office from its head office at Melbourne:—"We have struck very fair gold 90 feet level, the extent is not known yet; shares at present price 8s." A further cablegram, dated the 7th inst. states:—"Fortnight's run 59 ounces, 117 tons."

BAYLEY'S REWARD CLAIM.—The following cable, dated the 7th inst., has been received by this company's London office from its head office at Melbourne:—"Fortnight's run, 200 ounces, 410 tons."

BIG BLOW.—The following cable was received on August 6 from Mr. W. M. Vivian, the manager:—"Commenced crushing August 8."

BETHANGA.—Proceeds gold June, 1757; July, 2470; about half profit.—Wallace: Melbourne, August 7.

BLACK REEF PROPRIETARY.—A cablegram has been received from Johannesburg, dated August 6, stating that "No. 1 shaft has reached a depth of 108 feet, No. 2 shaft a depth of 98 feet, and No. 4 shaft a depth of 72 feet. Progress has been greatly retarded by water, which is now under our control. Formation continues very similar to Orion."

BRILLIANT AND ST. GEORGE UNITED.—The directors have received the following cablegram from the directors in Charters Towers:—"Have crushed during the month 1488 tons of quartz for 2848 ounces of gold. Have declared a dividend of 9d. per share payable on Thursday, the 22nd inst. The approximate value of this return is £9822."

BROKEN HILL PROPRIETARY.—The following cable was received by the London office on Tuesday morning, the 6th inst., at 10 a.m.:—"Manager is of opinion that cannot be anything material to report during the next few days. We are now using the only means available with favourable results. We intend, therefore, to suspend publication daily reports, but will inform you promptly any important developments." The publication of this cable has been delayed, owing to its having been mutilated in transmission.—Copy of cable a received from Melbourne, August 8, at 5.20 p.m.:—"General meeting held; passed off satisfactorily. Chairman stated at the meeting dividend for month of August will not be paid, owing to fire, but dividend of 1s. per share will be paid September. We expect to continue the usual dividend the remainder of this half-year. Anticipate expenses on account of the fire ought not to exceed £20,000. A vote of thanks was passed general manager, officers, men, and foremen for vigorous efforts made to extinguish the fire. Manager telegraphs that appearance continues of a highly favourable character, for very little smoke issuing; but considered necessary to continue repressive measures for the present; 10 smelting furnaces running, six at Port Pirie, 10 at the mine; two will start to-morrow, six still working carbonic acid gas.—Amalgamation plant. The mill is working its full capacity, four revolving furnaces chloridising plant started, remaining two repaired, and will re-start work on Monday. Concentration plant will be started to-morrow. The manager cables that for the week ending the 8th inst. 3818 tons of ore were treated, yielding 266 tons of lead, containing 102,517 ounces silver; also 1175 tons treated by amalgamating and leaching plants, producing 11,364 ounces silver. The price of the shares in Melbourne is £1 14s. buyers."

BUFFELSDOORN CONSOLIDATED.—The following cable has been received:—"Government recognising Verginings."

BURMA RUBY MINES.—Returns for July for the fortnight ending July 15:—"4400 loads washed producing rubies valued at 20,000 rupees."—For the fortnight ending July 31:—"7800 loads washed producing rubies valued at 32,000 rupees."

CHAMPION REEF.—The directors have received a telegram from the mine, dated August 3, giving last month's return of gold as follows:—"4700 tons of quartz produced 5704 ounces of gold. 1180 tons of tailings produced 304 ounces of gold. Total production for the month 6008 ounces of gold."

CITY AND SUBURBAN.—Last month's crushing yielded 10,096 ounces.

CROWN REEF.—Results for July: Yield in smelted gold from 120 stamp mill, 7679 ounces; yield in smelted gold from 120 stamp cyanide works, 4170 ounces; total, 11,849 ounces.

CUMBERLAND GOLD.—The directors have received the following cablegram:—"In 20 days' work 135 tons of quartz were crushed producing 140 ounces of gold; 10 head of stamps; costs £750. No. 5 level north is driven 522 feet. The reef is becoming pinched up, have started to crosscut (for); still continue stopping No. 4 level north. Have not re-commenced driving Intermediate level; south stopes show considerable signs of improving; tailings works recovered 452 ounces from 510 tons at a cost of £283; the estimated value £950."

DAY DAWN BLOCK AND WYNDHAM.—The directors have sold, through Messrs. Johnson, Matthey and Co. (Limited), bullion ex s.s. *Duke of Devonshire* for £5,181 10s. 3d.

DE LAMAR.—The following is the cable return for the month of July:—"Crushed during the month, 3600 tons; bullion produced in the mill, \$72,000; estimated value of ore shipped to smelters, \$6500; miscellaneous revenue, \$1055; total produce, \$79,555; total expenses, \$39,920; profit for the month of July, \$39,635; or at \$4.90 to £ sterling, £9089."

DON PEDRO.—Produce for the month of July 1450 citavas, equal 167 ounces.

DURBAN ROODEPOORT.—The following results for July have been received by cable:—"Quartz milled, 8475 tons; 60 stamps, 29 days, 4072 ounces. Tailings treated, 6215 tons; 29 days, 1827 ounces. Total, 5899."

EAST ORION.—The following cablegram has been received at the London office in reply to one asking for the latest information:—"East Orion. The mine has been favourably reported on by a competent and reliable engineer; the property has been well managed; the future prospects of the mine are good; have sampled the ores and find them good results."

ELKHORN.—Bullion produced in mill for week ending August 3, 9600 ounces.

FERREIRA.—Copy of cablegram received from Johannesburg. "Result for July. Tons crushed, 4519; bar gold extracted, 4768 ounces; concentrates caught, 165 tons; assay value of concentrates, 6 ounces 15 dwts. fine gold per ton.—Cyanide works. Bullion produced from tailings, 1199 ounces."

FORBES REEF.—A telegram has been received from the mines stating that the result for the month of July is 141 ounces of gold.

GELDENHUIS MAIN REEF.—"Profit for the month of July £3991. Gold produced 3375 ounces."

GEM OF CUE.—The following cable has been received from the company's agents at Cue:—"Whitelaw reports: Have struck another lode; lode is looking promising."

GEORGE GOCH AMALGAMATED.—The result of work done July is as follows:—"6640 tons crushed, yielding 1826 ounces, and 1126 ounces from tailings."

GINSBERG.—Result of July crushing: 1298 tons crushed, yielding 930 ounces of gold. Mine opening up well, and the new battery is now in course of erection.

GLENCAIRN MAIN REEF.—"Production for July, 4918 ounces; profit, £7300; 70 stamps, 29 days."

GOLCONDA GOLD MINES.—Copy of cablegram received from the manager at the mine, dated August 2:—"We have cleaned up after a run of 392 hours, crushing 315 tons, yielding 528 ounces smelted gold. An average sample of the tailings assayed 12 dwts. per ton."

GOLD FIELDS OF MASHONALAND.—Cotopaxi mine. The following cablegram has been received from Victoria, Mashona'land, announcing the result of the last month's crushing at the above mine:—"During the month mill worked 16 days, crushed 420 tons, yielded 348 ounces of gold including sweepings, east stopes have shut down; mill stopped for want of water; am prospecting."

HENRY NOURSE.—"Crushing for July, 29 days, 4994 tons produced 3039 ounces; cyanide works, 3960 tons produced 1460 ounces; 25-stamp mill, clean-up produced 62 ounces; total, 4561 ounces."

ISLE OF MAN.—The secretary has sold 100 tons of this company's ore at £9 5s. 6d. per ton.

JUBILEE GOLD.—Result of last month's crushings of 5025 tons yielded 2172 ounces of gold, and 1 from tailings 441 ounces of gold.

KOMATA REEFS.—The directors have received the following information from the manager, viz.:—"The ore is improving in the tunnel as we advance. We are crosscutting towards Black reef, progress has been retarded owing to bad weather."

KOFFYFONTEIN MINES.—A cable received from this company's mine states that 3050 carats were recovered during July.

KURNALPI.—The secretary reports having received a cable from the company's agent as follows:—"Machinery received. Lake (La Page) full of water. Success has commenced, crushing in first-rate style."

LA CAMPANA.—The London agents have received the following cable from Mr. L. H. Manning (Surveyor-General for the State of Arizona, U.S.A.), managing director of the company:—"Arrived here (Tucson) to-day. Mine in every way most satisfactory. Mill will start crushing September 1. Will return to the mine in a few days. I will guarantee a complete success.—Manning, Tucson."

LISBON-BERLYN.—A cable has been received from the manager giving the following results for the month of July:—"Milled 1400 tons (of 2000 lbs.), recovered 88 ounces. Tailings treated by cyanide 1450 tons (of 2000 lbs.). Recovered 505 ounces. Total recovered 593 ounces."

MAY CONSOLIDATED.—The following cable message, dated Johannesburg, 3rd inst. has been received at the office:—"The yield of gold during the past month (July) was 3566 ounces from 10,500 tons crushed. Mill running 29 days. Cyanide 11,955 tons 2459 ounces."

MESQUITAL DEL ORO.—The following cable, giving the result of the July mill run, has been received from the mine:—"45 stamps ran 789 hours (32 days 21 hours), and crushed 2032 tons of ore, yielding 760 ounces of bullion; value about £2788. Also crushed 70 tons of ore from the Acerada workings, and about 1931 ounces of bullion; value about £7812. Total month's crushing 3102 tons; bullion 2691 ounces; value about £10,600."

MEYER AND CHARLTON.—Result of working for month of July: 23 days running, crushed 5928 tons, gold won 2410 ounces, extracted from tailings 886 ounces, total 3296 ounces, profit for month £4740.

MONTANA.—By cablegram from the mine, the directors are informed that the total output for July was 6410 tons of ore which contained gold, 2380 ounces; and silver, 34,850 ounces. The estimated realisable value of the same is \$68,400.—Expenditure. Working expenses on revenue account, \$35,300; outlay on developments, \$12,000; extraneous expenses, including insurance, \$3800; permanent improvements and machinery, \$2100; total, \$53,200; not result, \$15,200."

MOSMAN GOLD.—The directors have sold through Messrs. Johnson, Matthey, and Co. (Limited), bullion ex s.s. *Duke of Devonshire*, for £2832 16s. 11d.

MOUNT MORGAN (Queensland).—Results for the month. of July:—Tons chlorinated, 6898; gold returned, 11,658 ounces.

MYSORE GOLD.—The directors have received a telegram from the mines, giving the result of the July crushing as follows:—"3800 tons of quartz produced 3620 ounces of gold. No rain yet, doing the best we can under the existing circumstances; at the present time we are working 60 stamps and cyanide."

NEW CLEWER ESTATE.—Results for July. From mill working 24 days. Crushed 1520 tons, yielding 729 ounces of gold.—From cyanide works. Treated 1085 tons, yielding 660 ounces of gold; total yield, 1389 ounces of gold; total value, £3484; estimated profit for month, £650.

NEW HERIOT.—Last month's crushing yielded 5368 ounces.

NEW KLEINFONTEIN.—The Anglo-French Exploration Company, as the London agents for the New Kleinfontein Company (Limited), have received the following information by cablegram from Johannesburg. The result of the crushing for month of July was as follows:—"From the mill 2140 ounces, from the treatment of tailings 686 ounces, making a total of 2826 ounces, as compared with last month 2638 ounces. Number of tons developed 8730, as compared with June 7500."

NEW PRIMROSE.—"Production for July 12,150 ounces; profit, £17,340; 100 stamps 29 days."

NEW QUEEN.—The directors have received the following cablegram, dated Charters Towers, August 3, giving result of crushing for past fortnight:—"260 tons yielding 530 ounces gold. Have drawn upon you for £1000."

NINE REEFS.—The directors have received a telegram from the mine, dated August 3, giving last month's return of gold as follows:—"410 tons milled, 130 tons quartz, yielded 71 ounces gold."

NIGEL GOLD.—Last month's crushing yielded:—Battery 1540 ounces, cyanide 1743 ounces, retreatment works 350, total 3633 ounces.

NUNDYDROOG.—The directors have received a telegram from the mine giving the return of gold for the month of July as follows:—"2800 tons of quartz produced 3092 ounces of gold; 600 tons of tailings produced 144 ounces of gold; total production for the month 3236 ounces of gold."

ORION.—Result of last month's crushings yielded 1500 ounces of gold from plates, 2250 from tailings; last month's profit was roughly estimated at £6000.

OOREGUM.—The directors have received a telegram from the mine, dated August 3, giving last month's return of gold as follows:—"4826 tons of quartz produced 5118 ounces of gold. 4758 tons of tailings produced 921 ounces of gold. Total production for the month 6039 ounces of gold."

OTTO'S KOPJE DIAMOND.—Machinery stopped for a week; work resumed on 6th inst., when 630 loads were washed, average 4 carats per 100 loads.

OURO PRETO.—This company has sold the gold obtained in the month of June, which realised £5575 3s. 8d.

QUEEN CROSS REEF.—With reference to the reef recently struck in the vertical shaft, the directors have received the following cablegram from Charters Towers:—"Have cleaned up after crushing 13 tons of quartz, gross yield 27 ounces of gold."

RAND CENTRAL ORE REDUCTION.—The London agency have received a cable advice that the directors propose declaring a dividend of 25 per cent. on the ordinary shares, and £6 per share on the founders shares, payable to all shareholders registered on July 31, subject to the confirmation of a general meeting to be held on August 26.

ROODEPOORT UNITED.—Crushing for July, 6380 tons, produced 13540 ounces; cyanide produced 1227 ounces; profit, £8700.

SALISBURY GOLD.—"Last month's crushing yielded 2277 ounces."

SILVER KING.—Results for July:—"Mill worked 30 days, crushed 2400 tons of ore, produced 25,000 ounces, silver. Shipped 21,000 ounces. Expenses \$14,000. Bullion on hand 15,000 ounces."

SOUTH LUIPAARD'S VLEI.—The following cablegram has been received from Johannesburg:—"Following are particulars of offer for purchase of 30 claims nearest Witpoortj; capital of company £120,000, of which we receive £70,000; 25,000 shares of working capital guaranteed at 30s. per share. Option to be given to guarantors of remaining 25,000 shares for six months at 40s."

STANDARD DIAMOND.—The London agency have received a cablegram announcing that the directors have sold 7000 reserved shares at 30s. each.

STANHOPE GOLD.—"Last month's crushing yielded 1050 ounces."

ST. JOHN DEL REY.—The following telegram has been received from Mr. Chalmers:—"Produce for the month of July 31,000 oits., equal to 3573 ounces troy; value, £12,012. Yield per ton 6.3 oits. (7621 ounces troy)."

SUTHERLAND REEF.—The crushing for July is as follows:—"20 stamps ran 29 days 21 hours, crushed 1790 tons, producing 769 ounces (estimated value £3037); expenses, £2100."

TRANSVAAL GOLD EXPLORATION AND LAND.—The directors have received the following cablegram:—"Working expenses for July, £1380."

TWIN LAKES PLACERS.—The manager reports the following results for July:—"Cubic yards of gravel washed, 170,000; square yards of bedrock exposed, 18,000; square yards of bedrock cleaned, 22,000; estimated value of bullion, \$9400."

VAN RYN.—Result of 27 days' working with 50 stamps:—"Mill, 4490 tons crushed, yielded 2004 ounces; cyanide works, 5035 tons yielded 842 ounces; concentrates yielded 65 ounces; total, 2911 ounces."

VICTORY (Charters Towers).—The directors have received the following cablegram from the head office, Charters Towers, dated August 6:—"Have cleaned up after crushing 13 tons of quartz, gross yield 27 ounces of gold."—The directors have received a further cablegram from the Victory (Charters Towers) Gold Mining Company's head office in Sydney, dated August 8:—"Crushing for the fortnight from No. 1 shaft, 135 tons for 51 ounces."

WAIHI GOLD.—This company have received advices from the mine that in the No. 2 level a large body of quartz has been cut, supposed to be the Welcome lode. The reef was cut on the 6th inst., and a sample from it where first cut assayed 32 dwts. of gold to the ton of 2240 lbs. A further cable has been received, dated August 6, stating that the "Crosscut is in quartz 10 feet. We have so far not met with the hanging-wall. A sample from it assayed 51 dwts. per ton of 2240 lbs."

WAIHI SILVERTON EXTENDED.—The following cable has been received:—"Have struck the lode; free gold showing."

WHITE FEATHER UNITED.—The directors have received news from the manager at the mines that water has been struck on the property at a depth of 130 feet.

WEMMER GOLD.—Profit for the month of June £13,842 18s. 8d.—Milling result for June: Stamps at work, 50; working time, 28 days 20 hours; tons crushed, 6500; tons crushed per head per day, 4.51; bar gold extracted, 4707.6 ounces; yield per ton crushed, 14.48 dwts.; tailings treated, 4375 tons; bullion returned, 1452.9 ounces; concentrates caught, 200 tons; assay value, 5½ ounces.—Note. The total yield per ton, including extraction from tailings and concentrates, is 21.27 dwts. fine.—Result of work done during July, just to hand by cable:—"6800 tons crushed, yielding 4398 ounces. 50 stamps working 29 days, and from cyanide plant 4750 tons treated, yielding 1533 ounces of gold. 210 tons of concentrates caught, assaying 100 dwts. (5 ounces)."

WEST AUSTRALIAN GOLD CONCESSIONS.—The directors have received a cablegram to the effect that a new gold bearing reef has been struck in the Sultan (Coolgardie) Gold Mine, a large property of 25 acres adjoining the Bayley's Golden South which is chiefly owned by the West Australian Gold Concessions (Limited).

WORCESTER EXPLORATION AND GOLD.—"The result of last month's crushings yielded 2080 ounces of gold."

ZEEHAN-MONTANA.—The following cable has been received from Hobart, dated 2nd inst.:—"Have shipped 1125 tons of first-class ore per s.s. *Hohenstaufen*, containing about 81 tons of lead and 12,000 ounces of silver."

—The directors of the EAGLE'S NEST GOLD MINING COMPANY (LIMITED) have allotted the 30,000 shares of the company recently offered to the shareholders in the Pig's Peak Development Company (Limited), the same having been over-applied for. Letters of allotment and regret were posted yesterday.

—The resolution to increase the capital of the OURO PRETO GOLD MINES OF BRAZIL (LIMITED) to £100,000 has been duly confirmed, and conditional allotment letters for the new shares have been posted to the shareholders.

—The first batch of letters of allotment and regret in the BURBANK'S BIRTHDAY GIFT GOLD MINES (LIMITED) has been posted. In consequence of the large number of applications there may be some delay in postage of the balance.

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LONDON: AUGUST 10, 1895.

MINERAL STATISTICS OF NEW SOUTH WALES—THE GOLD OUTPUT.

IN spite of the old saying that figures can be made to prove
 anything, it is yet always on figures that we must rely
 when we want any accurate information on any subject
 whatever. In mining matters more especially the value of such
 statistics as are contained in the Annual Reports of the various
 Colonial Departments of Mines is now becoming every day more
 fully recognised, and we have no doubt that we are doing our
 readers good service in calling attention to them as soon as they
 are issued. The report now before us—that of the Department
 of Mines and Agriculture of New South Wales for 1894—is an
 exceptionally interesting one, and affords some landmarks of
 the highest value by which to gauge the real progress of this
 colony in all that relates to mining. Of the importance of New
 South Wales as a mineral producer, a sufficient criterion is
 afforded in the statement which we here find to the effect that
 the aggregate value of the mineral products of this colony up
 to the end of 1894 amounted to £109,336,847. Of this amount
 the last decade has contributed £45,237,753, and the year 1894,
 with which we are particularly concerned, £5,056,136, this
 amount being in excess of the decennial average by

£432,361, although it shows a falling-off from the previous year
 by £382,395.

As far as can be judged, there seems, nevertheless, to be in
 most items an increase even over 1893 in the quantity of the pro-
 ducts, the decrease in value being rather due to the lower prices
 realised all round, this decrease being more especially noticeable
 in such items as coal, silver, and tin. Unfortunately, New
 South Wales is not the only part of the world in which an all-
 round depreciation in the value of its mineral products has
 made itself severely felt. That there has been no falling-off in
 activity in mining itself is further shown by the fact that in the
 past year there were 33,516 men engaged in mining, as com-
 pared with 30,122 in 1893. Moreover, the applications for
 permits or authorities to mine under the various Mining Acts of
 the colony all show an increase upon those of previous years.

It appears, accordingly, that mining generally is in a fairly
 flourishing condition, and, bearing this in mind, we must now
 analyse this generality, and study in detail the various items of
 which the total is composed. Gold naturally claims the first
 place, its right to which is indicated by the value of the total
 production thereof, which had amounted to over 41 millions of
 pounds sterling, from the time of opening the gold fields in 1851,
 up to the end of 1894, or about 40 per cent. of the value of the
 entire mineral output of the colony. The amount of gold won
 last year is put down at 324,787 ounces, valued at £1,156,717.
 This shows an enormous increase over the previous year's out-
 put, which was only 179,288 ounces, valued at £551,286, the
 increase being thus as much as 81 per cent. of the total output
 for 1893, and is, in fact, the highest return for any year since
 1873. No doubt the especial attention that has quite recently
 been devoted to gold mining all over the world, in view of the
 appreciation of the yellow metal, has had something to do with
 this marked improvement; but, perhaps, a more direct cause of
 this energetic revival may be found in the action of the New
 South Wales Government, which has dispatched very large
 numbers of the needy unemployed of the colony to the gold
 fields. It appears from the returns of the Government Labour
 Bureau that over 9500 men were supplied with railway passes
 and miners' rights on credit, to enable them to earn a living as
 "fossickers" on the various alluvial fields, or as miners in other
 parts of the colony. This method of affording relief was
 inaugurated in 1892, and seems to have been attended with
 highly beneficial results, both as regards the men thus assisted
 and as regards the increasing magnitude of the gold returns.
 Similarly the New South Wales Parliament has made not in-
 considerable grants of money in order to assist prospectors, and
 the results of this vote seem to be equally satisfactory. It
 appears that the number of men more or less continuously
 engaged in gold mining during 1894 was 17,207, being an
 increase of 5250 over 1893. Of the above number 8465 were
 working in quartz mines, and 8742 in alluvial, or, roughly
 speaking, about equal numbers in each. The returns of the
 Mining Registrars are very incomplete, so that it is impossible
 to say how much of the total gold won was obtained from alluvial
 and how much from quartz, but, taking the aggregate, it appears
 that for each man engaged there were won, during the year, 18.67
 ounces of gold, worth £70 15s. 3d. This figure would represent
 a fair average wage, but it must not be forgotten that on the
 one hand, a good number of the men must have been engaged in
 prospecting, or in sinking shafts and doing similar deadwork,
 and that others, no doubt, were only engaged in gold mining
 during a part of the time; while, on the other hand, a portion
 of the gold won must have been devoted to paying wages and
 salaries of men who do not figure in the total of gold miners, as
 well as in the purchase and repair of mining and crushing
 plants, payment of dividends and Government dues, and to other
 similar objects.

We have, so far, merely reproduced the figures as they stand
 in the reports; it is, however, worth while to look into the
 matter rather more closely, and see how these are arrived at,
 both for the sake of understanding them more thoroughly, and
 also as an instructive object-lesson in the art of producing finan-
 cial statistics. There seem to be two separate sources whence
 the figures representing the gold returns might be obtained. In
 the first place there are the returns by the Mining Registrars of
 the amounts of gold won in their respective divisions, and, in
 the second place, there are the statements of the gold exported
 and of that passed into the Mint during the year, the sum of
 these latter items being looked upon as representing the year's pro-
 duction. To turn first to the Mining Registrars' returns, we are
 met at the outset by the unfortunate fact that there are errors
 in the official report itself. Thus on page 34 of the report the
 total of these returns is given at 245,704.79 ounces, whilst on
 page 70 another summary of the same Registrars' returns is given
 as 246,904 ounces 16 dwts., the discrepancy occurring in the re-
 turns from an important district, that of Tumut and Adelong,
 which appears to be returned in the former case at 1200 ounces
 below its real amount, the higher being apparently the more
 correct figure. This is, of course, a mere piece of carelessness, a
 form of error to which we are fortunately not accustomed in
 Governmental returns, which usually pass through too many
 hands for such a mistake to escape detection. This is the
 more to be regretted because a series of comparisons and cal-
 culations are included in the report, all based upon this
 erroneous total.

Taking now the larger, and apparently more correct, total,
 let us compare it with the total as obtained by the second
 method; we shall find by this that the returns seem to be
 arrived at as follows:—

	Ounces.
New South Wales gold received in the Sydney	
Mint during 1894	222,988.17
Gold exported as bullion	89,676
Gold exported in tailings and pyrites	12,123
Total	324,787.17

The above is the figure given in the return as the total output
 for 1894. It is apparently based on the hypothesis that all the

gold sent to the Mint and exported during 1894 was won during the same year, and that the entire production of the year was disposed of in one or other of these ways before the end of the year, a hypothesis that is manifestly incorrect. For if it be even taken for granted that the gold got will always be realised at the earliest possible moment, which may very probably be the case, it is quite clear that most of the gold really won in December, 1894, would not figure in Mint or export returns till January, 1895, whilst this loss will be, or may be, to some extent compensated for by the gold which was won in the last month of 1893 figuring in the return for 1894. At the best, then, these Mint returns can form only an approximation to the truth. In studying the report of the Melbourne branch of the Royal Mint for 1894 we find in Appendix E a return showing that this Mint received during 1894 the quantity of 310.21 ounces of New South Wales gold for coinage. We, of course, presume that this is included in the item of bullion exported, although there is nothing to show that this is the case, the destination of the exported gold not being specified. We must, therefore, take the above figure of 324,787 ounces as the correct grand total. It proves to be in excess of the amount of the Registrars' return by 77,883 ounces, a discrepancy, it will be seen, of nearly 25 per cent. The report however, states that the Registrars "often have a difficulty in obtaining information from miners." It need hardly be pointed out that such a state of affairs is, from every point of view, a most regrettable one; it not only causes the statistics of the output of the colony to be looked upon with considerable suspicion, but is in every way opposed to the best interests of the gold miners themselves; if, as may well be supposed, an influx of foreign capital is desired to develop still further the mineral resources of the country, the first step towards obtaining such assistance must be the production of full, accurate, and thoroughly trustworthy statistics of its actual output.

This unwillingness to supply information contrasts most unfavourably with the state of affairs in the Transvaal, where a Chamber of Mines, initiated by private enterprise, without the assistance of legal enactments, or even, it may be said, of official recognition, nevertheless succeeds in producing admirably correct statistical records, by the willing co-operation of all concerned, they having readily realised that their own advantage lies in such a course, and we can only suggest that if the gold miners of New South Wales are too deficient in public spirit to voluntarily hand in correct records of their output, they should be compelled to do so by stringent legislative measures imposing severe penalties on false or incomplete returns, and we are thoroughly convinced that such a step would redound greatly to the benefit of the colony itself.

MINING PROSPECTS IN RHODESIA.

WITHIN the past few days there has been a rise in Chartered shares, which forms a curious commentary on the strictures lately lavished upon the financial conduct of the company. However irregularly the recent conversion may have been carried out, from the point of view of *la haute finance*, it is plain that the public is quite convinced of the money-making capabilities of the vast territories which the genius of CECIL RHODES has secured for the investment of British capital. It is, however, more than doubtful whether the immediate cause of the present rise in the price of the shares is rather to be found in the position of current politics than in any definite improvement in the mining outlook for Rhodesia. The installation in irresistible power of a Government which is known to favour a bold colonial policy, and to especially regard Mr. RHODES' schemes with approval, is heralded by many people as the forerunner of some adjustment of the relations between the British South Africa Company and the Imperial Government, which will vastly strengthen the position of the former. By Continental investors particularly, who do not recognise how largely in English politics personal, and even Governmental, sentiment has to be subordinated to public prejudices and tradition, a brilliant *coup* in favour of the Chartered Company may very well be anticipated. Englishmen hardly need to be reminded, in face of the recent history of the British East Africa Company, and of the protests which Mr. CHAMBERLAIN'S Bechuanaland policy is even now arousing in the Cape colony, that the Chartered Company is no more likely to obtain peculiar advantages from its political friends than its enemies. By consenting to a joint subsidy of the railway line from Bechuanaland to Bulawayo the Imperial Government has probably exhausted the full measure of the liberality which it will accord to the Chartered Company in the present stage of Rhodesia's development. The "boom" in the shares, like earlier ones, must, therefore, be regarded as having relation to their prospective value rather than to any immediate possibilities. They remain excellent purchases for those who are prepared to put them on one side and await the gradual development of Rhodesia's resources. It is a safe speculation to back British colonial enterprise and mining skill, but these are factors which require time to achieve success. In the meantime, the position of Rhodesia as a field for mining speculation is not one of unmixed attractiveness. The highly-mineralised character of the country is unquestionable, and we have Dr. JAMESON'S assurance that in another six months it will begin to produce gold. At the same time, the ascertained facts fall far short of the conditions which would justify all the heavy influx of European capital which has lately taken place. Companies have been floated with enormous capitals to take over huge blocks of territory and develop the more or less defined mineral wealth contained in them. In many cases immense sums have been paid to the vendors, and scarcely anything has been reserved for working capital, the actual working of the properties being reserved for subsidiary companies. These latter are now being floated, naturally upon terms to give handsome profits to the syndicates or companies which took over the properties in the first place. It is to be hoped that capitalists,

both here and on the Continent, will be careful to distinguish between the profits gained by transactions of this sort, and those due to actual mining results. There is no doubt that the auriferous deposits of Rhodesia are, as a rule, somewhat poor in character and very unevenly distributed. They will require great care in working if profits are to be made, and capital will have to be kept within bounds. Investors should take particular pains to secure first-rate technical testimony as to the value of the reefs to be worked before they put money into heavily-capitalised Rhodesian mining companies. Unfortunately, Rhodesia is overrun by a crowd of more or less incapable prospectors, many of whom are absolutely destitute of scientific knowledge, and who are ready to subscribe their names to the most extravagant promises. So far, the Chartered Company has taken no measures to protect the public and the mining profession against the devices of these adventurers. Seeing that the company has a direct stake in the mining enterprise of Rhodesia, it might properly take steps to require some qualification from men who set up to practise as "experts." It is to be hoped that the real mining experts now engaged out there will put this matter strongly and clearly before the administration, and prevent the present scandal of mining reports signed by men whose whole mining knowledge they themselves represent. Otherwise it is to be feared that we shall see a repetition in Rhodesia of the failures, the writings-down of capital, the closing of mines, and the discouragement of speculation which marked the early days of De Knap and the Witwatersrand.

NOTES AND COMMENTS.

ELSEWHERE we publish extracts from the report just issued by the directors of the Londonderry Gold Mine, which they have drawn up consequent upon the return of Lord Fingall. It is not exactly the document we should have expected from them, nevertheless they have touched upon many of the essential points concerning which we all desire the fullest information. It is their intention of calling the shareholders together next Friday, in the Great Hall, Winchester House, and to lay before them the many matters which undoubtedly require explanation. We shall anticipate a lively meeting, for, no doubt, the shareholders have many grievances against the directors for which they intend to demand satisfaction. They will have to decide whether they are prepared to institute proceedings against the vendors for fraud, a case, which if established, will go a long way to exonerate Lord Fingall and the directors from the blame which naturally has been attached to them. They will also have to consider and decide upon the less delicate matter of developing the mine at depth, and there is no doubt that they will give their unanimous consent to the course of action which the directors intend to propose, for evidently this is the only course they can adopt to get back the money they so readily and foolishly subscribed. There seems to be a consensus of opinion amongst "experts" that further developments will result in a discovery of deposits as rich as those already found, but great expectations cannot safely be built upon these opinions, for already disappointments of too grave a nature have followed a too implicit belief in former sanguine utterances.

THE North Queensland Mines Agency is a very flourishing concern. The directors have just issued their preliminary report for the past year, and it gives results with which every shareholder ought to be delighted. The profit for the past year shows a remarkable and encouraging increase upon that earned in the previous year, and it is quite natural that the directors, therefore, should congratulate the shareholders upon the highly satisfactory results of the operations of the company. The profits for the period under review amount to £140,695 16s. 3d., to which must be added the balance of £9746 7s. 8d. brought from the previous year, and which together amount to £150,442 3s. 11d. Out of this sum an interim dividend, upon the company's preference and ordinary shares, at the rate of 25 per cent. per annum was paid last January, amounting to £12,465 6s. 3d., and it is now proposed to pay a further dividend upon both classes of shares at the rate of 30 per cent. per annum, which will absorb £15,000, leaving an unappropriated balance of £122,976 17s. 8d., of which the directors propose to carry £100,000 to the credit of reserve, leaving a balance of £22,976 17s. 8d. to be carried forward to next year's account. The directors foreshadow "exceedingly encouraging" prospects; and as they have excellent opportunities for the profitable employment of additional capital, it is their intention to make in the near future a further moderate issue of ordinary shares to the shareholders, which, no doubt, will be eagerly taken up.

LIKE nearly all our commercial and industrial literature, the Board of Trade Returns are just at present cheerful reading. From whatever cause, or combination of causes, the returns for July are more satisfactory in character than those for any month during the year. In the main result exports show an increase for the month of £2,160,000, or not far short of 12 per cent., while imports have advanced £3,292,000, or a little over 10 per cent. One of the most satisfactory features in connection with the increase is that it is not confined to any particular branch, but apparently has affected the whole business of the country in all its departments. So far as the metal trades are concerned, the total quantity of iron and steel exported during the month was 280,762 tons, valued at £1,567,243. The figures for the corresponding month of last year were 228,478 tons, valued at £1,499,874, so that there is an increase of 22 per cent. in quantity and 4 per cent. in value. During the seven months ended with July, the quantity exported was 1,814,818 tons, valued at £10,809,139, whereas in the corresponding seven months of last year there were exported 1,528,448 tons, of the value of £10,591,487. The

returns for the seven months, therefore, show an increase of 18 per cent. in quantity and 2 per cent. in value, a highly gratifying expansion in both ways. In mining machinery the export for July, 1895, of £52,938, compares favourably with that of the same month in the previous year, £36,341, while, the total for the first seven months of this year reached £358,455, as against £221,545 during the corresponding period of the previous year. The whole machinery total for July of this year, is £1,333,891 against £1,297,575 for July in the previous year, while the first seven months of 1895 and 1894 are respectively £8,473,716 and £8,147,487. It will thus be seen that the improvement is as widespread as it is satisfactory.

ONE of the features of the mining market during the past week has been the great amount of business transacted in West Australian securities. Nearly every class of share has been regarded with more or less favour, but prominent amongst them has been undoubtedly the demand for the shares of the Black Flag Proprietary Company, which already stand at a considerable premium. This company has been brought out under the auspices of the Central Exploration Company of Western Australia—a company which has likewise attracted considerable attention. We have been favoured with a copy of a memorandum issued by the promoting company, and from this we quote at some length on another page. We have been given to understand that there has been no need to advertise the company, or to invite the public to take up the shares, as the whole of the capital has been subscribed for privately.

ACCORDING to the May statistics of the gold export of West Australia, which may be taken as a tolerably reliable reflection of the condition of the gold industry there, the four fields heading the list are Coolgardie, Murchison, Pilbarra, and Yilgarn. The first-named holds precedence with an export valued at £32,584, next comes Murchison with £24,937, Pilbarra follows with £10,334, and the last in the quartette is Yilgarn, with £4897. These are highly respectable and satisfactory figures for so young a field, but they do not do justice to the gold-bearing capabilities of West Australia. Until the Governmental regulations compel the publication of the full output of each producing mine, there will be no means of accurately gauging the possibilities of the colony in the gold-producing way. Other fields where this is done will continue to compare much more favourably with Coolgardie and Murchison than they are entitled to do on the bare merits of their production. Much has already been said as to the advisability of changing the existing condition of things, and establishing a regulation of the kind we have indicated. It seems to be so strongly recommended by common sense and expediency that, in the absence of any apparent reasons on the opposite side, it is to be wondered at that the Government does not act in the matter.

THE refreshing showers which have latterly been breaking over the Coolgardie gold field have merely brought into greater prominence the uncertainties of the water question. It is the custom for directors at mining meetings to speak as if there were no water difficulty at all to cope with. Those who do this are, to our thinking, as greatly in error as the small minority who speak as if the scarcity were a rock upon which all mining enterprise in the colony would ultimately split. Although modified according to local conditions, and in some cases, perhaps, even annihilated, for the most part it is true to say that the difficulty exists, not in so great a degree as to baffle ingenuity and enterprise, but merely so as to incite to determination and industry. Difficulties, as Mr. Moreing says, exist only to be overcome, and the determined spirit in which they have been attacked by the heads of the Australian industry gives every promise of their being successfully combated. Under existing circumstances, the greatest bar to energy in this direction is the uncertainty in which the whole question is involved. If enough water for the whole colony can be obtained by deep boring, directors of companies are naturally loath to incur any considerable expenditure in other directions, such as might ultimately prove useless and abortive. Those among the heads of the colony who have taken a wise view of the interests committed to their charge have long seen the necessity of clearing away this bar to enterprise and initiative, and setting the question at rest for good.

WITH this view the Public Works Department a short while ago invited tenders for the construction of a borehole to a depth of 3000 feet on a spot to be selected by the Engineer-in-Chief anywhere within a 20 mile radius of Coolgardie. Geologists and experts had already expressed a decided conviction that deep boring would not yield any sufficient supply of water, but a feeling generally obtained that the statement should receive the actual test of experiment. Accordingly, the probable issue of the boring was already being generally canvassed when to the surprise of everybody no tenders were received in response to the Governmental invitation. Investigation soon revealed that the shyness on the part of the contractors—of whom there were several in the colony possessing a suitable plant—was wholly due to the conditions attaching to the contract, involving the author of the accepted tender in a string of onerous possibilities, such as no prudent business man would easily undertake. Some difficulty was anticipated in the selection of the precise site for the borehole, and the Public Works Department reserved to themselves the right to order the suspension of the works at any time, and their recommencement at another point within the area agreed upon. Even if the contractor had his plant upon wheels, like a travelling menagerie, he would have had to encounter the greatest difficulty in continually loading and unloading, taking down and re-erecting his plant. Under these conditions there is little doubt that the unfortunate man would have been in the position of coming out of the affair at a loss, and probably with no compensating extras. If the Government wish the work to be done they must modify the conditions imposed upon the contract.

THE MINING MARKET.

FRIDAY EVENING.

Irregular fluctuations, owing to realisations, but strong general tendency.—Chartered the prominent feature.

As we anticipated last week, there was an accumulation of orders during the holidays, and the market has again been briskly employed. But realisations have also prevailed, so that the course of quotations has not been so regular, and, indeed, in several directions a fall has occurred. Still, as a rule, fresh buying has counteracted sales, with the result that there are more gains than losses, and any sagging of prices during this long 19 days' account has proved almost non-existent. That there was a probability of some reaction aggravated by a blank Saturday and a Bank Holiday, we quite admit, and doubtless a general fall would suit many dealers who being "short" of stock are anxious to see the market fall. Only the public continue buying, the very difficulty of obtaining delivery of the shares purchased stimulating the energy of investors, and at the same time compelling the "bears" to cover their ill-judged commitments. The conditions may therefore be said to suggest a lively period throughout the holidays, for the Continent continue to buy freely and the home demand seems at times to be insatiable. Mail advices, whether from South Africa or West Australia, are as satisfactory as could be desired, and fully confirm previous cables, while the July crushings at Witwatersrand not infrequently show a further increase in output, owing, of course, to additional plant and the improved methods of treatment. The various elements on Thursday all contribute to perhaps the greatest "boom" known, and render the movement phenomenal. To measure its importance, or even probable duration, is beyond ordinary standards, and to estimate what may happen next becomes impossible. The investment character bestowed upon leading Kaffirs is derived from possibilities rather than a return just compiled in Johannesburg, which shows that the amount declared in dividends since January 1 last 45 companies has reached into seven figures, several companies paying over 100 per cent., and some as much as 125 per cent.

Business was resumed on Tuesday morning, when quotations again began to soar, but the strength was followed by a reaction, though New Primrose and Wolhuter were steadily maintained. Paris bought largely here, as well as on their own side; still, realisations followed on that Bourse. The Barnato Stocks were a strong point on Wednesday, and a smart rise took place in East Rands, nor were Chartered's backward Johannesburg Investment were likewise good, but West Australian sorts had a comparatively dull appearance. A strong undercurrent was generally noticeable on Thursday, and prices being very firm in several directions—notably for Minerva and Chartered—jumped another 15s. This remarkable rise has continued to-day, which imparted vitality to others, and prevented any marked relapse, in spite of further sales, prior to the settlement commencing to-morrow (Saturday).

South African Mines

Dealings have commenced at a premium of £11 in the shares of the new Robinson Bank, which, as stated last Friday, partakes of the nature of a Trust, and Barnato Consolidated have risen to 4½ to 4¾. Johannesburg Consolidated Investment are 15s. better at 5½, as the company is again embarking largely in fresh South African enterprises. New Primroses, as indeed all other Barnato descriptions, have sensibly improved in view of Mr. "Barney's" early reappearance in Throgmorton-street, when important developments are looked for. Increased attention has been given to the Glencairn from the fact of the property making a larger return for July, and also because the erection of 30 additional stamps is nearly completed, and with 100 head going, much larger yields are naturally looked for. The closing quotation is 4½, after being 4¾. Buffelsdoorn have reappeared in popular favour, rising to 8½, whilst Central "Buffels," which company is on the heart of the former's reef, have remained at 1½ to 1¾. Other gold properties have not on balance recorded any sensational gains, though an immense number of transactions have been concluded in New Clewer, Robinson Randfontein, Transvaal Gold, and Wolhuter at various quotations. Minerva have, for some obscure reason, risen £1 to 3½, and another event was in Alexandra Estates, which have changed hands at 28s., but close lower. Rand Mines gave way a point or so, Modderfontein too are flatter, and Jumpers, Crown Reef, Bantjes, Glencairn, and 1 Crosses are down, yet progress is being made on the Bantjes property. Wemmer and Worcester shares have hardened to 12½ and 5 respectively, Nourse Deep reached 7, and Consolidated Deep Levels and Jubilee are steady at 10½ and 10. Western Kleinfontein improved to 3½, Sheba to 2½, and South Nigel to over 1½. Modderfontein B were quoted at 4½, and North Randfontein were dealt in at 3½. Randfontein drooped a little, Rietfontein were flat at 5. Meyer and Charlton, notwithstanding an improved crushing return, are rather cheaper. Heriot, Durban-Rodepoort, Champ d'Or, Aurora West, and Buffelsdoorn, Consolidated, too, declined, and East Rand furnished a fall to 7½. Knight's were this afternoon down to 9, and Kleinfontein, Metropolitan, Rodepoort Deep, Spitzkop, Stanhope, East Rand Central, and Afrikaner have also eased off, but continued purchasers of African Gold properties have carried that through from 3 to 3½. The lower-priced properties have not been neglected. Cameron Blocks, for instance, rising to 9s., and Lonsdale, Bulawayo Reefs, Heidelberg, South Nigel, and even Horsham Monitors have been bid for, the latter being 1½, and are a new importation. Matabele Ancient Reefs steadily advanced to 13s. 6d., because on the property of this company with the singular name a test crushing from the Christmas Reef is stated to have produced nearly 2 ounces to the ton. Lisbon Berlyn have receded somewhat, while Sheba, Moodies, Barberton properties generally were firm. Rhodesian undertakings have not always followed the lead of Chartered, although the latter have been so largely dealt in as to rise to 7½, and are this evening as good as 7. Henderson's Estates have been over 5½ buyers, as a new subsidiary company is being undertaken, and as for the British South Africa Company's shares, no inconsiderable portion of the late buying is understood to be due to an endeavour to found a sub-Chartered Company for the purpose of taking over the parent's right. Beira Railway shares have recovered to 10s. 6d., and Mozambique and Bechuanaland have shown activity, the latter being 3, but the Oceana group was rather neglected. Consolidated Gold Fields were purchased, rising from 12½ to 13, and Gold Trusts were fully maintained. Anglo-French Explorations have advanced to beyond 5, and Lomax Development, and Rhodesia Development, have kept in demand, the latter rising £2 to nearly £16, while Diamonds are lower, though the strike at Amsterdam is not serious. Jagersfontein, nevertheless, improved on rumours of a 10 per cent. dividend, despite the recent fall of reef,

St. Augustine have not quite retained the whole of last Friday's improvement. The various Lydenburg properties have been very active, the Estates being up to 2½ to 3 prem., and Lydenburg Gold Exploration shares, which have just appeared under excellent auspices, were freely dealt in at 1½ to 1¾, for the company appears to be important. Waterfall Estates are rather cheaper at 16s., and African Estates remain strong. Sutherland Reefs, which have been about 16s., are now lower.

Miscellaneous Shares.

Considerable animation was shown by New Zealand mines, the recent Hauraki introductions having proved, it is said, very successful, but though supported, prices of this group have not perceptibly altered. Waihi Gold have, however, risen. Indian gold mines were better, the crushings tending to induce quiet buying, and copper shares, whilst subject to fluctuation in response to Paris and the movements in the metal, have risen on balance, Rio Tinto being as good as 17½. Wentworth and the Charters Towers' properties have closed under moderate support.

West Australians.

An extensive amount of business has been transacted in this section, and a fresh rise was established, but not fully retained, owing to sales to secure profits as customary before an Account. Londonderry have been flat throughout, the Continent selling rather freely to-day, and the price has fallen to only 10s. The mystery about this company deepens rather than lessens, and an explanation is hardly wanted. The general account open in this department is rather large, and therefore, for the time being, Hannans Brown Hill, despite a recovery, are lower. Great Boulder have been 4½, and are nearly that now. North Boulder, too, have been active, rising to about 10s., and Big Blow, Mainland Consols, West Australian Exploration, Gold Fields, Hampton Plains, Wealth of Nations, and the majority of others, are not materially lower—if at all. The new issues continue to be well received, and the shares are invariably at some premium, but Kalgoorli are lower at 2 premium on realisations, though Gem of Cue, Sherlaw, and Birthday Amalgamated have improved in value. Broken Hill Proprietary shares have recovered to 1¼. The following further settlements have been fixed for Wednesday next (August 14). West Rodepoort Deep, Goldenhuis Deep (new shares), Rose Deep (new shares), Tokatea, Hauraki, Waitekauri Extended, and Hampton Gold Hill, 8s. 6d. paid.

British Mines.

The buoyancy in the Cornish Share Market has to some extent abated, owing chiefly to the heavy shipments and decline in the tin market, though the undertone on the whole is fairly firm, and shares have been moderately bid for at low prices. The Dolcoath market, owing to the lack of support, and a desire to realise on the part of a few holders of their recent allotments, has sagged away a bit, and closes dull, with very little doing. Carn Brea lower about 2½ to 3. East Pools quiet about 5 to 5½. A fair business in Killfretts at from 13s. to 15s., whilst Tincrofts have been a good deal dealt in, closing steady at about 9½, after having been 10½. Bassets rather firmer, and buyers over 2, the amalgamation negotiations, it is reported, being nearer a settlement than before. Business limited in most other cases.—Risen: None.—Fallen: Carn Brea, 10s.; Dolcoath, 2s.; East Pool, 5s.; South Crofty, 2s. 6d.; South Frances, 2s. 6d.; Tincroft, 15s.; West Frances, 5s.; and Wheal Grenville, 10s.

NEW ISSUES.

THE HAWK'S VIEW GOLD MINING COMPANY (LIMITED).

This company has been issued with a capital of £60,000 in 60,000 shares of £1 each, of which 20,000 are now issued to the public, for the purpose of acquiring a number of properties, "specially selected," as the prospectus says, "after a careful examination by the Hon. W. O. Hodgkinson, F.R.G.S., late Minister of Mines for Queensland." Mr. Hodgkinson's report, we are told, was confirmed by both Mr. Stone and Mr. George Davey, manager of Lord Fingall's "World Treasure" Mine. Mr. Hodgkinson says:—"The properties form the northern continuation of the Wealth of Nations lode, being, with one slight interval, a portion of a prolonged extension of gold-bearing reefs extending from the Wealth of Nations shaft to G.M.L. 1040 Hawk's View. During my inspection I visited the Wealth of Nations and took two samples of stone then being hauled up from the lowest level, 77 feet. One I crushed and panned off with a good 5 ounces prospect per ton. The other is in a shipment of ore forwarded in conjunction with this report." Further on he says:—"I desire to note—as equally applicable to the three leases 1039, 1040, and 1642—the fact that, while most of the samples I treated, and in the aggregate they numbered 50 or 60, showed little or no gold visible to the naked eye, they nearly all yielded a heavy streak of fine gold by panning, the simplest and most reliable test applicable. Of a portion of 'The Hawk's View,' he says:—"I think very highly of these properties, showing, so far as developed, good paying and rich quartz in a strong lode extending without any break from the 'Wealth of Nations' to G.M.L. 1085, thence beyond the extreme northern boundary of the G.M. leases lying north of 1040. The interruption in the line of continuous quartz in 1895 is due, I may affirm, solely to the shaft being sunk in a depression covering the older formation with newer coating. Timber is good and plentiful. The ground is the easiest and most inexpensive to work I have seen. Water has been got in the 'Wealth of Nations' water shafts at 160 feet, and should be procured at a less depth in the immediate vicinity of these properties. With such a development of the lodes as may be fairly anticipated from present appearances, stone sufficient to keep a 20 head battery going should be available."

THE LYDENBURG (TRANVAAL) GOLD EXPLORATION COMPANY (LIMITED).

The capital of this new company is £150,000, in 150,000 shares of £1 each. It has been formed to acquire, explore, and develop the farms of Elandsfontein, Clermont, Wakkers Dal, Branddry, Klipfontein Hoek, Nootgedacht, and California, situated in the Valley of the Blyde, in the district of Lydenburg, Transvaal. The whole of the farms lie at the junction of and between the Olifant and Blyde Rivers. The Ohrigstad River runs through the farm Klipfontein Hoek. The nearest Railway at present is that from Delagoa Bay, being about 90 miles from the property. The Silati River Railway, when completed, will be the nearer to Nootgedacht farm, which is the northern portion of the property. From the indications obtained from work done on other properties in the district, the whole of the country for many miles around is believed to be of the same geological formation as that to the south. Gold has been reported to have been found lower down in the series than the Pilgrim's Rest limestone, and it seems probable that the rocks on these farms are a lower series, and this company will immediately proceed to prospect the farms with a view to ascertain the exact geological character of the rocks and their relation to other ascertained gold deposits in the neighbourhood, and by doing so to find out what rocks to look for and where gold may be found.

NOTES FROM ANDALUCIA.

PAPER ON THE CUPREOUS PYRITES DEPOSITS OF ANDALUCIA AND ALGARVE.

RETROSPECTIVE AND PROSPECTIVE.

Extracts and Notes from Mining Operations and Reports on these during the past 25 years.

By WILLIAM GUTHRIE BOWIE.

(Continued from page 923.)

WHILE tradition has been thus at work, one of the effects of its glamour has been "illusions," which have led to Over-calculation

of the possibilities of these masses in wealth.

One of the most visible and more easily calculated matters is that of the ancient scorias; yet many exaggerated conjectures and estimates have been formulated as to their quantity, how produced, and by whom.

Here poetical and romancing minds have pictured the numberless slaves employed in these mining and metallurgical operations, perishing in the mines or beneath the heavy stripes of their taskmasters, their toils and misery, day and night, and tribulation from which they had never a moment's respite; or again describing these scorias, the evidences of all these fatigues and woes, as "dreary wastes and deserts," "blackened plains with endless heaps of scoria and volcanic-like desolation," which with the present modern calcination of this sulphur ore, "the birds of the air dread to cross," and viewed at night, with their infernal-like smoke and flame, recall to memory Milton's "Hell," by their hallucinations—

"Yon dreary plain, forlorn and wide,

The seat of desolation, void of light,

Save what the glimmering of these vivid flames

Casts pale and dreadful."

Under such poetic illusions, it has been easy not only to exaggerate the number of persons employed and the quantity of scoria, but also the magnitude of the ancient mining and metallurgy, and the quantity and quality of these masses of ore they so diligently exploited. Thus there are such exorbitant numbers given by some that they need not be mentioned, but we may take the 30,000,000 tons of ore estimated by Don J. Gonzalo Tarin—(see Works, page 57)—as having been extracted and treated, and whose residue these scorias represent, as the most reasonable calculation of all, and which he estimates would produce the ancient 1,200,000 tons of copper. Still a more recent insight into the volume of these heaps has been obtained by the spaces of the old workings in the mines, and the utilisation of these scorias for ballasting the railways, and these indicate a lower figure, and somewhere about 20,000,000 tons of ore, as extracted by the ancients from this class of pyrites, for the whole of these cupreous deposits of Andalusia and Portugal (and this is still probably above the true amount), and yielding 800,000 tons of copper. This, or the former of Don J. Tarin, divided over the different periods of exploitation, is reduced to a small annual production, more in keeping with the world's requirements in the times of Solomon or the Romans. There is, first, the period of the natives, previous and during commercial relations with the Phœnicians, then that of the Phœnicians themselves, who, in turn, were followed by the Carthaginians and Greeks. Then, fourthly, by the Romans; then Goths and Moors; for, however much is written against the Moorish exploitation, there are too many evidences of their mining operations everywhere to be discarded, and they seem to have from Almaden to Huelva, and Lisbon to Malaga, done much mining. Then, lastly, there is the period of the Spaniards, which last and that of the Moors we may exclude, just to show how much over-calculated there has been in the past. Allowing only one thousand years from the prehistoric times of the natives down to the ending of the Roman operations, and 30,000,000 tons, or 20,000,000 tons of ore, treated in that time, would only be a production in copper at 4 per cent. of 1200, or 800 tons yearly; and if we leave the whole to 400 years as the period the Romans exploited these masses, then this would only be a production of 3000 or 2000 tons of copper yearly, which would not require such crowds of slaves as some suppose; while, as to these slaves, it may be remarked that in ancient times they were too valuable to be so indiscriminately goaded to death by excessive labour, and it is very questionable that any existed, seeing the determined resistance and military character of the natives, who fought for their own land, and with or against Carthaginian or Roman with a heroism and devotion never surpassed, so that even only after 200 years of conciliatory measures did the Romans obtain partial possession. While a still more effective proof of the small traffic in, at least, native slaves is found in the edicts and mining laws of the Governors and Emperors of these days, which indicate free labour and contracts everywhere in mining, and also in metallurgical operations, and it is thus possible only a few thousands of Romans, &c., were constantly employed in all Andalusia and Algarve (see *Mining Journal*, 1894, p. 153-478 for tablet and Roman laws). The varieties of classes of scoria indicate the changes of nationalities in possession of the land and treating these ores, and clearly indicate the lengthened period of their exploitation, much exceeding the highest time calculated, as well as many changes in the methods of exploitation and of smelting, especially before and after what is considered to be that of the Romans, while the freedom of their scorias from gold, silver, lead, and copper indicate a perfection and care in their operations, even surpassing those of our scientific times. Their mining works as well as metallurgy indicate no sudden "rushes" like those of our own times, but apparently a well-studied and steady production and equitable proceeding in everything undertaken. Also the machinery they used is in many instances still of the same class yet adopted, and is found to answer in many circumstances, such as the ancients would have encountered, far better and more economically than our best appliances, even backed by the power of steam. There is nothing to show that coal was used in smelting, and it is generally supposed that wood, or charcoal from wood, has been the fuel used by all the ancient and modern workers, and it is still in many parts of Spain used in foundries and forges. If we consider the destruction caused to the timber, whether as trees or shrubs, to produce charcoal in this Province, even for the small metallurgical operations of the past century, and on the same lines, if we only estimate a small yearly production of copper for a few years, it is evident that at the same rate of consumption of charcoal per ton of copper produced during the past 50 years this small production of the ancients would have rapidly exhausted all the wood available in Andalusia; it is also estimated that the population of Spain was several times greater than now, and mining and metallurgical operations were in operation all over the country. Thus it would appear that no sudden large production of copper could have occurred owing to this want of the necessary fuel, and hence the probability of a slow and lengthened exploitation, keeping pace with the growth of

the timber in this Peninsula. At the same time it is, perhaps, not too much to state that this absence of fuel may have obliged them to devise and adopt other processes, and they may have even applied that of "rapid oxidation," as initiated by Holloway, and afterwards improved by Austin and others, for smelting ores, and at one time, in 1879, proposed for use in Rio Tinto and similar mines. (See Messrs. Fraser and Chalmers pamphlet, *The Mining Journal*, 1894, p. 759, &c.)

(To be continued).

CORRESPONDENCE.

We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.

BROKEN HILL SULPHIDES.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—My attention has been drawn to your issue of July 20, in which you publish an exhaustive article on the above problem, taken from the *Adelaide Advertiser*.

The writer of this article has evidently closely studied the sulphide question, and perfectly understands the difficulties which confront every attempt at solving the question. The method which he advocates, and which is being tried on a fairly large scale at the two mines, Block 10 and Block 14, is that of wet concentration by jigs, invented by Mr. H. R. Hancock, superintendent of the Wallaroo and Moonta Mines.

After carefully perusing this article I gather that the results obtained by these jigs, after a very gradual process of reduction, having only 4 to 6 per cent. of slime, is as follows:—

Percentage of recovery.

Lead.	Zinc.	Silver.
Block 10 . . . 50 to 70 per cent. . . 6 to 15 per cent. . . 35 per cent.		
Block 14 . . . 55 per cent. . . 14 per cent. . . 25 per cent.		

About three years ago the Clarkson-Stanfield Concentrator Company (dry process) was asked to treat different parcels of sulphide ore from the Proprietary Mine, British Broken Hill, and Central Broken Hill, the quantities being up to 10 tons lots. The Clarkson-Stanfield Company at that time knew little about the complex nature of this ore and how intimately the galena, blende and silver are associated together.

The experiments were conducted under the supervision of Mr. Panton, late director, and Mr. F. F. Thomas, late manager of the Central Broken Hill, and Mr. Fawcett of the Proprietary Mine. The Central Company employed Mr. F. Claudet, assayer to the Bank of England, as assayer; the Broken Hill Proprietary employed their own assayer, and the assays of the British ore were made by the company's engineer, Mr. J. H. W. Park, B.Sc. The ore was crushed to pass a 40 mesh, with the result that a product of slime was made varying from 25 to 30 per cent. of the various bulks, and which was at that time untreatable. Including this slime, the percentage of recovery was as follows:—Proprietary, 62 per cent. of lead; Central, 61 per cent.; British, 59 per cent.; while the zinc in the lead concentrates varied from 6 to 8 per cent.

Had the ore been crushed gradually, commencing with a 10 mesh, and the intermediates further reduced and retreated, the slimes (according to the figures supplied by the article) would have been minimised to 4 to 6 per cent., and the percentage of lead recovery increased to:—Proprietary, 78 per cent. of lead; Central, 77 per cent.; British, 74 per cent., without increasing the amount of zinc remaining in the lead concentrates—viz., 6 to 8 per cent.

The percentages of silver obtained in these trials were:—Proprietary, 40 per cent.; Central, 40 per cent.; British, 46 per cent.; and these could have been correspondingly increased had the amount of slimes been minimised.

The article further states that a very clean concentrate, good enough for the English market, can be made by these jigs, containing 65 to 70 per cent. lead and only 8 per cent. zinc. On referring to the trials made by the Clarkson-Stanfield Company I find that a product containing 15 to 20 per cent. of this bulk was made, assaying over 80 per cent. of lead and under 3 per cent. of zinc. The writer of the article referred to seems to think that the results obtained by these jigs are so good that the vexed sulphide question has been solved. A glance at the results made by the Clarkson-Stanfield Company three years ago without any preliminary study of the question will prove that on this complex ore, as on others, wet concentration is far inferior to the dry process.

P. STRICKLAND,
Chairman of the Clarkson-Stanfield Company.

8, Colonial-avenue, Minorities, E.

MENZIES MINING AND EXPLORATION CORPORATION, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—By a circular just issued, the interesting feature in this corporation seems to be the acquirement of certain leases 110 miles north of Coolgardie, on which gold is supposed to exist, and the intention of farming these out to subsidiary companies, on the strength of their own representations.

Without exception, it appears to be the most insinuating document, or, in other words, the most important piece of cheek one could possibly conceive, to call for £250,000 before any proof had been given whatsoever.

It is stated that £75,000 will be devoted to working capital, but they don't say how much has been spent in proof of their assertions, which latter item is presumably nil.

These shares are apparently already rigged to a premium, hence their clients are invited to fall in and make a market with the declared intention of making a fine thing of it, on the present buoyant and increasingly active state of the Western Australian market.

By the time the shares are high enough for insiders to clear out they fondly hope to be the parents of various infant prodigies, who will keep things lively till the crash comes.

I have already explained in your columns the cost of proving a gold mine, and that no venture should exceed £35,000 to £40,000 before it is clearly proven to be a permanently paying concern, which certainly applies to the present case, and beyond which anything is clearly a gambling transaction.

The "guinea-pigs" are evidently on the war-path, as the skirmishers are out.

SCRUTATOR.

August 9.

—The LOMAGUNDA REEFS (LIMITED) have opened an office at 15 and 16, George-street, St. Swithin's-lane, E.C.

—The capital of the RAND GOLD MINING COMPANY (LIMITED), including £30,000 of working capital, offered for subscription, has been over-applied for, and letters of allotment and regret have been posted.

—Mr. James D. Alexander has retired from the board of the MIDDLE BLACK REEF GOLD MINES (LIMITED).

THE BLACK FLAG PROPRIETARY COMPANY, LIMITED.

Capital, £800,000, in shares of £1 each;
£75,000 is reserved for working capital.

WE quote the following from a memorandum which has been issued by the promoting company, the Central Exploration of Western Australia (Limited).

"The mining leases acquired by this company are known as the Black Flag Proprietary properties. They consist of four continuous claims on the line of the discovered reef, and embrace a total area of 65 acres 3 rods 16 poles, and are known as leases No. 562K, No. 449K, No. 473K, and No. 513K. This property lies some 35 miles a little east of north of the township of Coolgardie. The claims lie mostly along a broad low ridge in a north-easterly direction, having a wide flat running round the west side and south end, a narrow basin on the east, and higher ground into which the ridge merges to the north."

"The outcropping, a crest-like mass of ferruginous quartz in wall-like form from 10 to 20 feet high, and in places 100 feet wide, is bold and well defined, a conspicuous feature in the landscape, and visible from a considerable distance. This massive outcropping rises gradually from the plain, commencing a little inside the south boundary of lease No. 449K, and continues in a northerly direction for a length of some 2500 feet to where the ground falls, but the outcroppings of the reef are seen throughout the whole length of the claims, some 4400 feet. Careful investigation and exploration have shown that the property is traversed from end to end by two of the largest and best-defined reefs which can be seen in the Coolgardie district; these reefs run parallel, and contain gold more or less throughout their entire length, some portions being very rich indeed. The reef rock at the surface is a massive iron-stained quartz. Gold is mostly seen as fine specks on the face and joints of the quartz, but, where abundant, it occurs in sheet and leaf-like form running into the stone or cleavage lines."

"The east or main lode is that on which the principal amount of work, both at surface and in depth, has been accomplished up to the present. The following are the particulars of the work which has been done upon the several leases:—

"Block 562K.—This is the most southern block. The lode has been exposed in one place by an open trench 4 feet deep, showing lode matter 17 feet wide. The stone broken from the cap of the reef shows gold freely. Another cutting has been opened 50 feet north of the one previously mentioned, the lode being strong and well-defined for 20 feet in width. Fine gold is visible freely in the stone, and a bulk sample taken from here yielded equal to 7 ounces 13 dwts. per ton. The outcrop for some considerable distance north these workings also shows gold on the surface where broken. A shaft has been sunk on this claim east of the last-mentioned cutting. It was sunk for water and also to develop the lode, and is now down to a depth of about 90 feet. Water has been met with here to the extent of 300 to 400 gallons per day, and deeper sinking would no doubt reach larger supplies. A depth of about 80 feet in this shaft a crosscut has been put out and intersected the main lode. Obedient information was received at the end of May last that a rich body of ore had been struck here, and advices received from time to time as to the progress of the work of development show that a lode of almost phenomenal size and richness exists. The crosscut has been driven through the lode from the hanging-wall up to the present time a distance of 42 feet, and the footwall of the lode is not yet met with."

"For the first few feet of this drive the lode assayed from 4 to 10 ounces per ton, and other samples taken have given by assay the following results, viz.:—From the first 8 feet of solid reef driven through, commencing from the hanging-wall, 4 ounces per ton; then from 7 feet of felsitic rock, 1 dwts. per ton, and assays of samples from the further 27 feet of the lode have given results varying from 2 ounces 9 dwts., 13 dwts., 16 dwts., and 17 dwts. respectively. The crosscutting of the reef has now been stopped and driving commenced on the richer portion of the lode. Already the northern drive has been extended 10 feet, the ore continuing similar and very rich.—Block 449K. This is adjoining and north of Block 562K. On this lease broken ferruginous quartz spreads out over a very large area. The ground rises abruptly to about 60 feet above the level of the plain, and the west reef seems to junction with the main reef, forming a broad expanse of iron-stained weathered quartz some 150 feet wide. Several pits have been sunk on the outcrop, and trenches of considerable length driven through it at different points, where in all cases the reef is auriferous, and in some places very rich stone has been found. About the centre of the claim there is a trench 50 feet long by 3 feet deep along the eastern or hanging-wall of the main reef, and from this very rich rock, carrying leaf and plate gold, has been taken. One piece of stone, some 5 lbs. in weight, on being fractured, was in many places found held together by the metal, and a boulder of seemingly sterile quartz on being broken exhibited a fine show of gold in the centre. A sample of the lode taken over 6 feet in length and 4 feet in width from one of the trenches gave a return equal to 130 ounces of gold per ton, and gold is discovered freely in the lode croppings. A shaft has been sunk on this claim to a depth of 70 feet, and has reached the reef, the hanging-wall of which is well-defined. Going north from this shaft the outcrop of the main reef reaches its greatest width, and is over 100 feet wide. Along this portion of the reef several pits have been put down on its eastern side, exposing rock containing visible gold in a fine state mostly. Opposite the point at which the richest sample above referred to was taken, and about one chain west, the parallel or west lode shows very prominently, being fully 10 wide. It has been tried by an opening 4 feet deep and 6 feet long, and where exposed shows very good gold. One chain further north gold can be freely seen in the outcrop, and beyond this the lode seems strong and well defined.—Block 473K. This is the next claim on the line of the reef. Here the reef gets very massive, and stands up boldly above the surface, culminating in a craggy wall-like mass near the north end of the claim. There are three openings, ranging from 6 to 10 feet in depth, on this claim, averaging 30 to 40 feet wide, exposing portions of the lode, which in each instance contain fine gold. About the centre of the claim there is a perpendicular shaft which has been put down close to the east side of the outcrop. A drive from this shaft has struck the reef, which is found to be auriferous, and the drive has gone through it for a distance of 28 feet.—Block 513K. This is the most northerly block of the claims. The outcrops of the two reefs show very distinctly here, being some 200 feet apart, the western reef being the most promising. Prospecting pits, which have been put down on both reefs, give indications of gold. At one point a piece of Jasper quartz, with very little visible gold, assayed 2 ounces per ton. On the southern boundary of this block an opening has been made 6 feet deep, exposing a portion of the lode for a width of 3 feet 6 inches, and which contains very good gold. A bulk sample from this opening gave over 5 ounces of gold per ton. Fifty yards further north, in another trial pit 3 feet deep and 4 feet wide, the reef also showed good gold, and a bulk sample from there gave 2 ounces 19 dwts. 18 grains per ton. A shaft has been sunk in the middle of this claim reaching to a depth of 55 feet, where the reef was intersected and a transverse gallery driven through it west, proving the thickness to be 30 feet, 10 feet of this being massive saccharine quartz and 20 feet broken opaque quartz. Samples of both bands of quartz were taken, and many pannings with assay indicated that the 10 feet seam contained some 4 to 6 dwts. per ton, and the 20 feet about half of this."

—The registered office of the AFRIKANDER GOLD MINING COMPANY (LIMITED) have been removed to 23, College-hill, Cannon-street, E.C.

—The UNITED EXPLORATION COMPANY (LIMITED) will remove on the 12th instant from 118, Bishopsgate-street, E.C., to 120, Bishopsgate-street, E.C.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, AUGUST 9.

Copper.

THE market opened, after the holidays, firmer, with good speculative and consumptive demand, but soon weakened in consequence of gold shipments from America, which, if resumed on a considerable scale, would certainly interfere very seriously with the course of business in that country. This led to considerable selling of short prompts, the result being a reaction of over £1 per ton. During the last day or two calmer views of the situation have been taken, and the market recovered several shillings near the close. In the face of the fall, consumers have been holding back and values are somewhat reduced, whilst manufactured remains dull. In the United States, Lake is still quoted at 12 cents. The daily course of the G.M.B.'s market during the present week has been as follows:—The opening on Tuesday (after the holidays) was firm at 5s. advance, spot G.M.B.'s realising £45 5s. and three months £46 13s. 9d. But heavy speculative sales checked the improvement and converted it into a decline, spot touching £45 18s. 9d. the same day, £45 8s. 9d. on Wednesday, and £45 1s. 3d. on Thursday. The business done was large, amounting for the three days to not far short of 5000 tons, although the Exchange was closed on Wednesday afternoon for the funeral of the late Chairman. The close of Thursday brought a rally to £45 s.c., and to-day opened with a further recovery—viz., to £46 three months. The market was, however, irregular and values fluctuated considerably, falling to £45 15s., and then rising again to £46 1s. 3d. three months. The close is firm at £45 12s. 6d. s.c., and £45 18s. 9d. three months buyers.

Tin.

The market opened lower at £64 5s. for spot Straits, and business which took place was done down to £63 17s. 6d. s.c., and £64 7s. 6d. three months. The market tendency continued weakish, and prices very irregular during the whole of the week. £64 2s. 6d. was paid for spot on Tuesday evening, then on Wednesday and Thursday the value eased off to £63 10s. s.c., which was followed by a recovery to £63 15s. s.c., and £64 2s. 6d. three months. On Friday, business in the latter position was done up to £64 15s., then again down to £64 7s. 6d. and this afternoon after business in spot at £64 5s., and forward at up to £64 12s. 6d. again, the two positions closed respectively at £64 12s. 6d. to £64 5s. and £64 7s. 6d. to £64 10s. In the Dutch market Billiton fell on Tuesday from 38½ fl. s.c. to 38 fl. at which that position closes, with three months at ½ fl. premium, and Banca s.c. at 39 fl.

Pig Iron.

Scotch shipments last week were about 5000 tons, as against about 2500 tons for the same week of last year. Values ruled irregularly between 45s. 5d. s.c. to 45s. 0½d., but the close is firmer at 45s. 5½d. buyers of s.c., with hematites quoted 45s. 4½d., and Cleveland 36s. 6d.

Lead.

is rather less strong, and the closing quotations—viz., £10 17s. 6d. to £11 soft foreign, and £11 to £11 2s. 6d. English—show a loss of about 2s. 6d. per ton.

Spelter.

is without any essential change of phase, and closes quiet at £15 5s. ordinaries and £15 7s. 6d. specials.

Antimony.

remains steady at £32.

Quicksilver.

First hands quote £7 5s., and seconds £7 3s. 6d., as last week.

The following are to-night's (August 2) prices of metals:—

	Copper.	£ s. d.	¢	¢
Tough cake and ingot	...	49 0 0	49 10 0	
Best selected	...	50 0 0	50 10 0	
Electrolytic Copper	...	51 10 0	51 10 0	
Sheets and sheathing	55 0 0	
Flat bottoms	58 0 0	
Good merchantable, spot, & 3 months respectively	...	45 12 6	45 12 6	
Copper tubes, seamless	0 0 7½	
BRASS: Wire	0 0 5½	
Tubes (solid drawn)	0 0 6	
Sheets	0 0 5½	
PHOSPHOR BRONZE: Alloys H.	78 0 0	
" VII. C	81 0 0	
" XI.	78 0 0	
" Vulcan brand A1	72 0 0	
DURO METAL	73 0 0	
BULL'S METAL	65 0 0	
FERROBRONZE (Vivian's).	
Ingots	...	0 0 3½	...	
Ordinary sheets, plates, bolts and bars	...	0 0 6½	...	
Screw bolts and nuts	...	0 0 7	...	
Pump rods, plain	...	0 0 7	...	
Finished	...	0 0 10	...	
DELTA METAL: No. 4 (per ton)	
Sheets and plates (per lb.)	
Bars, round, square, flat (per lb.)	
hexagon (per lb.)	
Tin.	
English, ingots, f.o.b.	...	67 10 0	68 0 0	
" bars	...	68 10 0	69 0 0	
" refined	...	69 0 0	70 0 0	
Straits, spot and 3 months respectively	...	64 5 0	64 10 0	
Australian, spot, and three months respectively	...	65 5 0	65 10 0	
Banca (in Holland)	...	65 2 6	65 5 0	
TIN PLATES: Charcoal, best quality	...	0 13 0	0 14 0	
" ordinary	...	0 11 0	0 12 0	
" Coke, best quality	...	0 10 0	0 10 6	
" ordinary	...	0 9 0	0 9 6	
These prices of tinplates are f.o.b. at Swansea: at Liverpool 6d. per box more.	
IRON.	
Fig. G.M.B., f.o.b. Clyde, spot	2 5 3½	
Scotch pig, No. 1 Gartsherrie	2 11 0	
" Coltness	2 13 0	
" Clyde	2 8 6	
" Govan	2 8 6	
Bars, Welsh, f.o.b. Wales	4 15 0	
Plates	5 10 0	
Bars, Staffordshire, at works	4 17 6	
Sheets	6 10 0	
Plates	6 7 6	
Hoops	5 10 0	
Ship plates, Middleborough	4 17 6	
STEEL: English spring	7 10 0	
" cast	12 0 0	
" Rails at works, according to section	3 10 0	
Spanish or soft foreign	...	10 17 6	11 0 0	
English pig, common	...	11 0 0	11 2 6	
" L.B.	11 10 0	
" sheet	12 2 6	
" bar lead	12 2 6	
" pipe	12 12 6	
" red	12 12 6	
" white	15 15 0	
" patent shot	14 15 0	
Spelter.	
Silesian ordinary brands	15 5 0	
" special brands	15 7 6	
English Swansea	...	15 17 6	16 0 0	
Sheet Zinc	...	15 0 0	15 10 0	
Antimony	32 0 0	
Flasks, 75 lbs. warrants	...	7 3 6	7 5 0	
Ore, c.i.f., U.K. ports	
1st quality, 50 per cent. and upwards	...	0 0 10	0 0 11	
2nd do. 47 per cent. to 50 per cent.	...	0 0 9	0 0 10	
3rd do. 40 " 47 per cent.	...	0 0 7½	0 0 8	
98-99½ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)	0 1 7	
do do (1 ton lots)	0 1 8	
9-99 per cent. guarantee	...	0 1 2	0 1 4	
Nickel.	

"THE MINING JOURNAL" SHARE LIST.

BREVIA TIONS AND REFERENCES.—The following are the designations of the abbreviations and references which occur in the Share List:—A, Antimony; A, Arsenic; B, Blende; Br, Borax; C, Copper; D, Diamond; G, Gold; I, Iron; L, Lead; M, Manganese; N, Nitrate; P, Phosphate; Q, Quicksilver; R, Rubi; S, Silver; SL, Silver-lead; Sul, Sulphur; T, Tin; and Z, Zinc. * In the "Amount of Share" column of British Mines signifies the amount of mine to be conducted on "Cost Book" principle; 1 in the "Head Office" column of African Mines signifies that the address given is not that of the head office, but of a sub, or transfer office; and 1, following the name of a mine, signifies that they are subject to the Limited Liability Law of the South African Republic.

* The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and other readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

BRITISH MINES.

Name	Closing Price, Aug. 9, 1895	Closing Price, Aug. 2, 1895	Am't. of share	Latest Dividend	Called up per Share	Amount of Stock or No. of Shares Issued	Situation of Mine	Head Office
Blue Hill's .....CT	15/-	15/-	10	2/- May '81	5 19 5	5,353	Cornwall	Camborne.
Botallack .....CT	15/-	15/-	10	2/- May '81	5 19 5	1,880	Cornwall	St. Just.
Carn Bre .....CT	2 3/4	3 3/4	10	2/6 Dec. '93	22 8 5	6,000	Cornwall	Carn Bre.
Cook's Kitchen .....CT	5/ 10/-	5/ 10/-	10	2/6 Dec. '93	35 15 1	4,900	Cornwall	Camborne.
Devon Gwanton CA	par 3/4 pm.	par 3/4 pm.	1 0	1/6 May '95	0 12 6	25,000	Tavistock	8, Pinsky circus.
Devon Gt. Cons. CA	20/ 25/-	20/ 25/-	1 0	1/6 May '95	2 0 0	10,240	Cornwall	8, Pinsky circus.
Dolcoath .....CT	21/ 23/-	15 1/2	1 0	—	1 0 0	—	Cornwall	Camborne.
Do. ....CT	2 3/8 3/8 pm.	—	1 0	—	part paid	—	Cornwall	Camborne.
Drakewalls CTM	—	—	0 5	—	0 2 0	81,856	Cornwall	Dashwood House.
East Halkyn .....CT	10/- 25/-	20/ 25/-	1 0	—	0 12 6	12,000	Flintshire	67, Lord St., Liverpool.
East Pool .....AT	5 5/8	5 5/8	1 0	1/6 Sept. '94	0 9 9	6,400	Cornwall	Illogan.
Gawton .....CA	—	—	2 10	—	3 7 3	12,000	Devon	20, Great St. Helens.
Great Laxey .....L	1 2	1 2	4 0	5/- Apr. '92	4 0 0	15,000	Devon	Douglas, Isle of Man.
Green Hurth .....L	1 6	1 6	1 0	—/6 June '89	0 19 0	32,000	Devon	Newcastle.
Halkyn .....L	9 10	9 10	1 0	2/- June '95	1 0 0	10,000	Flintshire	Chester.
Do. Dis. Mn. Drain	10 11	10 11	10 0	4/- Mar. '95	10 0 0	10,000	Flintshire	Cornwall, Cumb. Chester.
Isle of Man .....L	3 3/4 4 1/4	3 3/4 4 1/4	5 0	2/- — '95	5 0 0	11,000	Flintshire	Chester.
Killfretth .....L	13/9 16/3	13/9 16/3	5 0	1/6 Nov. '94	5 11 6	6,000	Cornwall	Truro.
Leadhill .....L	7 1/2 1 1/2	7 1/2 1 1/2	6 0	3/- Sep. '92	6 0 0	20,000	Flintshire	30, Pinsky circus.
Llanarmon .....L	—	—	1 0	—	1 0 0	11,992	Denbigh	S. Werburgh Chmbrs.
Llanarmon .....L	—	—	1 0	—	0 15 0	3,790	Flintshire	Chester.
Levant .....CT	4 1/2 5	4 1/2 5	1 0	4/- Nov. '94	11 9 6	2,800	Cornwall	Pensance.
Lovell .....CT	—	—	5 0	1/3 Nov. '91	1 18 7	7,165	Wendron	3, Gt. Queen-st., S.W.
Miners .....L	—	—	5 0	5/8 Mar. '95	0 18 0	5,000	Wendron	Miners, N. Wales.
Northdown L.L.Z	3/6	3/6	1 0	5 1/2 Feb. '91	0 18 0	48 5 5	Wendron	Newcastle-on-Tyne.
New Cooks Hill TC	—	—	1 0	—	10 18 3	4,920	Cornwall	Camborne.
New Miners .....L	—	—	1 0	1/- Oct. '92	10 18 3	30,000	N. Wales	6 Queen-street-place.
North Hendre .....L	—	—	2 10	8 p.c. year '81	2 10 0	11,854	Flintshire	11, Nwgt. st., Chtr.
Paro .....L	—	—	1 0	—	1 0 0	5,000	Flintshire	Billiter sq. buildings.
Phoenix United TC	1 1/2 2/-	1 1/2 2/-	1 0	1/- Mar. '90	7 4 8	10,865	Cornwall	Liskeard.
Polberro .....L	15/ 20/-	15/ 20/-	1 0	10 p.c. Sept. '91	3 7 9	18,000	Cornwall	37, Walbrook.
Rhosmor .....L	—	—	1 0	—	1 0 0	10,000	Flintshire	Cornwall, Cumb. Chester.
Rhosmor .....L	—	—	1 0	—	0 10 0	10,000	Cornwall	Cornwall, Cumb. Chester.
Ro. Condor TC	2/6 7/8	2/6 7/8	1 0	3/6 Apr. '93	7 17 8	6,123	Cornwall	20, Great St. Helens.
South Crofty TA	15/- 20/-	15/- 20/-	1 0	—	17 10 6	5,769	Cornwall	Pool, Cornwall.
S. Frances United TC	5/- 10/-	5/- 10/-	1 0	—	2 7 6	6,000	Cornwall	Redruth.
South Halkyn .....L	—	—	1 0	—	1 0 0	10,000	Flintshire	S. Werburgh Chmbrs.
South Halkyn .....L	—	—	1 0	—	0 7 0	30,000	Flintshire	S. Werburgh Chmbrs.
Talcoro .....L	—	—	1 0	—	0 13 0	20,000	Flintshire	81, Forgate st., Chtr.
Tincroft .....L	9 10	10 1/2	1 0	2/- Aug. '94	15 7 8	6,000	Cornwall	Carn Bre.
Weardale .....L	—	—	1 0	1/3 Oct. '90	1 10 0	60,000	Durham	3, Lombard-court.
West Frances .....L	20/ 25/-	25/ 30/-	1 0	2/6 May '93	17 1 7	5,144	Cornwall	Camborne.
West Killy .....L	5 1/2 5 3/4	5 1/2 5 3/4	1 0	2/- Dec. '94	1 2 0	6,000	Cornwall	37, Walbrook.
Wheel Agar .....TA	2/6 7/8	2/6 7/8	1 0	2/6 Aug. '88	23 15 2	6,000	Cornwall	Redruth.
Wheel Basset .....L	1 1/2 2 1/4	1 1/2 2 1/4	1 0	10/- Apr. '88	12 3 0	6,144	Cornwall	Redruth.
Wheel Friendly .....L	—/6 1/-	—/6 1/-	1 0	—	0 12 9	10,000	Cornwall	110, Cannon-st., E.C.
Wheel Grenville .....L	1 1/2 1 1/4	1 1/2 1 1/4	1 0	3/- July '95	18 2 0	6,000	Cornwall	7, Union-court, E.C.
Wheel Killy .....L	4/ 6/	4/ 6/	1 0	3/- Mar. '88	4 5 8	6,500	Cornwall	Truro.
Wheel Metal & F.T.	—	—	1 0	—	0 13 9	10,784	Cornwall	14, Broad-street.

EUROPEAN MINES.

Name	Closing Price, Aug. 9, 1895	Closing Price, Aug. 2, 1895	Am't. of share	Latest Dividend	Called up per Share	Amount of Stock or No. of Shares Issued	Situation of Mine	Head Office
Alamillos .....L	10/- 15/-	10/ 15/-	2 0	—/8 April '95	2 0 0	35,000	Spain	6, Queen-street-place.
Alava .....Q	0 3/4	0 3/4	1 0	1/- May '93	1 0 0	51,584	Spain	4, Tokenho. Bldgs.
Consett Ore .....L	5 1/2	5 1/2	1 0	5/- July '94	1 0 0	55,200	Spain	19, Grey-st., N. castle.
English Cr. Spelter	3 1/2 3 1/2	3 1/2 3 1/2	1 0	2 1/2 Aug. '94	1 0 0	84,000	Lombardy	9, Queen-street-place.
Fortuna .....L	17/6 22/6	17/6 22/6	2 0	1/- April '95	2 0 0	25,000	Spain	6, Queen-street-place.
Libiola .....L	3 1/2 3 1/2	3 1/2 3 1/2	5 0	4/6 Apr. '95	5 0 0	50,400	Italy	Dashwood Ho., E.C.
Linares .....L	4 1/2 5	4 1/2 5	3 0	4/6 April '95	3 0 0	14,938	Spain	6, Queen-street-place.
Mason & Barry...C	2 1/2 3	2 1/2 3	5 0	2/- May '94	5 0 0	185,172	Portugal	37, Cannon-street.
Oscar .....C	—	—	5 0	—	0 4 6	117,240	Norway	5A, Austin Friars.
Pestarens .....G	7/ 8/	5/6 6/6	3 0	—	3 0 0	67,809	Italy	67, Queen-street-pl.
Pontgibaud .....SL	—	—	20 0	11/6 Dec. '94	20 0 0	14,000	Cousson	6-7, Queen-street-pl.
Rio Tinto .....C	17 1/2 17 5/8	1 1/2 17 1/2	10 0	5 1/2 July '95	10 0 0	325,000	Spain	30, St. Swithin's-lane.
Do. (Mort. Bonds)	—	—	100 0	2 1/2 July '95	100 0 0	218,740	Spain	30, St. Swithin's-lane.
Do. (2nd do.)	—	—	100 0	5 1/2 July '95	100 0 0	212,460	Spain	30, St. Swithin's-lane.
Do. (3rd do.)	—	—	100 0	5 p.c. Apr. '93	100 0 0	237,080	Spain	30, St. Swithin's-lane.
Ripanj .....Q	2/6 3/6	2/6 3/6	1 0	—	0 19 0	95,000	Servia	120, Bishop-st. Wg.
Tharsis .....C	4 1/2 5 1/2	4 1/2 5 1/2	2 0	4/- May '95	2 0 0	625,000	Spain	Glasgow.
West Pros. Pref.	—	—	10 0	8 1/2 July '95	10 0 0	385	Germany	Walbrook Ho., E.C.
West Prussian Pref.	—	—	10 0	8 1/2 July '95	10 0 0	5,450	Germany	Walbrook Ho., E.C.
West Prussian Or.	—	—	10 0	8 1/2 July '95	10 0 0	10,050	Germany	Walbrook Ho., E.C.
Wohlfahrt .....L	—	—	1 0	3 1/2 Dec. '94	1 0 0	99,634	Prussia	17, Victoria-st., S.W.
Wohlfahrt .....L	—	—	1 0	3 1/2 Dec. '94	0 10 0	9,980	Prussia	17, Victoria-st., S.W.

INDIAN AND ASIATIC MINES.

Name	Closing Price, Aug. 9, 1895	Closing Price, Aug. 2, 1895	Am't. of share	Latest Dividend	Called up per Share	Amount of Stock or No. of Shares Issued	Situation of Mine	Head Office
Asia Minor Pref. SL	—	—	0 10	—	0 10 0	47,430	Asia Minor	2, Metal Ex. Bldgs.
Do. Ord.	—	—	0 10	—	0 10 0	55,838	Asia Minor	2, Metal Ex. Bldgs.
Balaghat Mysore G	2 1/2 2 1/2	2 1/2 2 1/2	1 0	—	0 19 0	159,945	India	6-7, Queen-street-pl.
Burma Ruby.....G	17/6 18/6	17/6 18/6	1 0	—	0 19 0	298,581	Burmah	Suffolk House, E.C.
Champion Reef...G	4 1/2 4 1/2	4 1/2 4 1/2	1 0	4/- Sept. '95	1 0 0	200,000	India	6-7, Queen-street-pl.
Colar Central ....G	1 1/3 1 1/3	1 1/3 1 1/3	1 0	—	1 0 0	200,000	India	Dashwood Ho., E.C.
Coromandel ....G	13/ 15/-	13/ 15/-	1 0	—	0 15 0	95,000	India	6-7, Queen-street-pl.
Goldfields Mysore G	21/- 22/-	21/- 22/-	1 0	1/- July '93	1 0 0	275,000	India	6-7, Queen-street-pl.
Hyderabad Dec....	4 1/2 4 1/2	4 1/2 4 1/2	10 0	—	10 0 0	116,000	Deccan	16, St. Helen's-place.
Kempinkote GdFd	2 1/2 3/-	2 1/2 3/-	0 5	—	0 3 8	750,000	India	6-7, Queen-st. place.
Mysore .....G	2 1/2 2 1/2	2 1/2 2 1/2	1 0	2/6 June '95	1 0 0	248,354	India	6-7, Queen-street-pl.
My. Barnhalli ....G	3 1/3 3 1/3	3 1/3 3 1/3	1 0	—	0 18 0	100,007	India	2, East India Avenue.
Mysore Reefs ....G	9 10 10 6	9 10 10 6	1 0	—	1 0 0	160,000	India	6-7, Queen-street-pl.
Mysore West (N) G	17 1/2 18/6	17 1/2 18/6	1 0	—	0 19 0	127,408	India	Dashwood Ho., E.C.
Mysore Wynad G	17 1/2 18/6	17 1/2 18/6	1 0	—	0 19 0	125,000	India	Dashwood Ho., E.C.
Nine Reefs .....G	2 1/2 3/3	2 1/2 3/3	0 10	—	0 10 0	250,000	India	6-7, Queen-street-pl.
Rundvdroog .....G	1 1/2 2 1/2	1 1/2 2 1/2	1 0	1/6 July '95	1 0 0	200,000	India	6-7, Queen-street-pl.
Ooregum (D.F.O.) G	3 1/2 3 1/2	3 1/2 3 1/2	1 0	2/- Aug. '95	1 0 0	145,000	India	6-7, Queen-street-pl.
Do. (10 1/2 Pref.)	3 1/2 3 1/2	3 1/2 3 1/2	1 0	4/- Aug. '95	1 0 0	107,011	India	6-7, Queen-street-pl.
Do. (10 1/2 Pref.)	3 1/2 3 1/2	3 1/2 3 1/2	1 0	2/6 Apr. '95	0 5 0	12,989	India	6-7, Queen-street-pl.
Pahang Kabang T	1 1/2 1 1/2	1 1/2 1 1/2	1 0	—	1 0 0	200,000	Malay Pa.	4A, Jeffrey's sq., E.C.
Straits Developmt.	1 1/2 2	1 1/2 2	1 0	—	0 19 0	184,292	Pahang	15, Cophall Avenue.
Yerrakonda .....G	1 1/2 2/6	1 1/2 2/6	0 4	—	0 2 9	187,491	Mysore	6-7, Queen-street-pl.

NORTH AMERICAN MINES.

Alaska Mexican...G	1 1/2 1 1/2	1 1/2 1 1/2	85	7 1/2-5d. July '95	85	160,000	Alaska.....	30, St. Swithin's-lane
Alaska Treadwell G	4 1/2 4 1/2	4 1/2 4 1/2	82 1/2	1/6 July '95	82 1/2	200,000	Alaska.....	30, St. Swithin's-lane
Almaden and T...S	-/8 1/2	-/6 -/9	1 0	-/8 Mar. '91	0 1 10	331,008	Colorado.....	6, Queen-street-place
American Belle...S	1 1/2 1 1/2	1 1/2 1 1/2	1 0	3/- Jan. '90	5 0 0	392,880	Colorado.....	25A, Old Broad-street
Anglo Mexican...S	—	—	5 0	3/- Jan. '90	5 0 0	74,850	Mexico.....	23, College Hill
Arizona (Pref.) Cu	4 1/2 4 1/2	50/ 50/3	4 0	1/- July '95	4 0 0	158,920	Arizona.....	74, Geo.-st., Edinbor
Do. 6 1/2 A Deben.	107	108	100 0	6 1/2 May '95	100 0 0	2135,300	Arizona.....	74, Geo.-st., Edinbor
Do. 7 1/2 B Deben.	99	99 1/2	100 0	7 1/2 May '95	100 0 0	2181,300	Arizona.....	74, Geo.-st., Edinbor
De Lamar.....GS	2 1/2 2 1/2	2 1/2 2 1/2	1 0	1/- July '95	1 0 0	400,000	Idaho.....	6, Draper's-gardens.
Dickens Custer GS	2 1/2 2 1/2	2 1/2 2 1/2	1 0	—	0 19 3	420,000	Idaho.....	Winchester Ho. E.C.
Elkhorn.....S	6/- 7/-	6/6 7/6	1 0	-/3 July '95	1 0 0	175,007	Montana.....	6, Draper's-gardens.
Emma.....S	1 1/2 1 1/2	-/9 1/3	0 5	—	0 5 0	403,618	Utah.....	15, Geo.-st. Mansn. Ho.
Gen. M'g. Assoc. ...	6 1/2 7	6 1/2 7	5 10	14/- Apr. '95	5 10 0	27,469	C. Breton.....	Blomfield House.
Golden Feather G	19/- 20/-	14/6 15/6	1 0	—	1 0 0	180,003	California.....	8, Stephens Ca E.C.
Golden Gate.....G	5/- 6/-	5/- 6/-	1 0	—	0 19 6	79,600	California.....	8, Stephens Ca E.C.
Golden Leaf.....G	3/- 3/6	3/- 3/6	1 0	—	1 0 0	300,259	Montana.....	8, Draper's Gardens.
Harquahala.....G	3 1/2 4/6	3 1/2 4/6	1 0	-/8 Oct. '94	1 0 0	300,000	Arizona.....	6, Draper's Gardens.
Holcomb Valley G	1 1/2 1 1/2	1 1/2 1 1/2	0 5	—	0 5 0	540,000	California.....	14, Cornhill, E.C.
Idaho.....GS	5 1/2 5 1/2	5 1/2 5 1/2	0 5	-/2 Dec. '94	0 5 0	143,439	Idaho ...	140, Leadenhall-st.
Jackson Goldfields	1 1/2 1 1/2	2 1/2 2 1/2	5 0	—	0 5 0	408,635	California.....	11, Poultry, E.C.
Jay Hawk (New)G	1 1/2 2/6	1 1/2 2/6	1 0	-/8 Dec. '92	0 19 3	285,000	Montana.....	Dashwood House.
La Plata.....S	2/- 2/6	2/- 2/6	0 5	1/3 Oct. '92	0 4 6	405,000	Colorado.....	11, Poultry, E.C.
La Yaca.....GS	4/- 5/-	4/- 5/-	1 0	—	0 19 3	200,000	Mexico ...	20, Bucklersburg, E.C.
Mammoth Gold ...	—	—	1 0	—	1 0 0	400,000	Pinal, Ariz.....	257, Winchester Ho.
Mesq. d'1 Oro (P) G	—	—	5 0	—	5 0 0	10,000	Mexico ...	Dashwood Ho., E.C.
Mesq. d'1 Oro (D) G	—	—	5 0	—	5 0 0	10,000	Mexico ...	Dashwood Ho., E.C.
Montana.....GS	11/- 12/-	11/- 12/-	1 0	-/3 July '95	0 19 0	657,158	Montana.....	Gresham House, E.C.
New Colorado ...S	—	—	1 0	—	0 17 0	65,000	Colorado.....	Abchurch Cham. E.C.
N. Gold Hill.....G	2 1/2 3/-	2 1/2 3/-	1 0	—	0 19 3	191,045	N Carolina.....	15, George-st., E.C.
New Guston.....G	12/6 15/-	11/3 13/9	1 0	1/- Oct. '92	1 0 0	110,000	Colorado.....	25A, Old Broad-st.
New Hoover Hill G	-/6 3/-	—	0 10	-/9 Dec. '85	0 10 0	120,000	N Carolina.....	Langthorne Ho. E.C.
Palmarajo.....GS	3/- 3/6	3/- 3/6	1 0	—	1 0 0	418,888	Mexico ...	4, Cophall-building
Pinos Altos (D) GS	5/ 6/	5/ 6/	1 0	-/8 Mar. '90	1 0 0	100,000	Mexico ...	11, Cannon-street.
Do. 15 1/2 Gum Pref	7 1	—	1 0	—	1 0 0	60,000	Mexico ...	110, Cannon-street.
Richmond.....GSL	20/ 22/6	15/ 17/8	5 0	1/- Nov. '94	5 0 0	54,000	Nevada.....	44, Coleman-street.
Sierra Butte.....G	9/ 11/	10/ 12/	2 0	-/8 Apr. '95	2 0 0	122,500	California.....	138, Leadenhall-st.
Do. Plumas Eur. G	10/ 12/	10/ 12/	2 0	-/9 Apr. '95	2 0 0	140,265	California.....	138, Leadenhall-st.
Springdale.....G	2/- 2/6	2/- 2/5	1 0	20 Aug. '94	1 000,000	Colorado.....	20, Abchurch Lane.	
Twin Lake Placers	1 1/2 1 1/2	1 1/2 1 1/2	1 0	3/- Feb. '95	1 0 0	26,000	Colorado.....	5, Lawrence P. H. E.C.

AFRICAN MINES—(Continued).

Name.	Closing Price, Aug. 9, 1895	Closing Price, Aug. 7, 1895.	Am't. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
Joe's Reef	5/- 7/5	5/- 7/8	1 0	—	1 0	57,484	De Kaap ...	21, Mining Lane.
Johannesburg G.F.	5/6 6/8	5/6 6/8	1 0	—	1 0	99,537	Johannesburg	31, Lombard st., E.O.
Johannes. Invest.	5/4 5/4	1/5 4/4 x0	1 0	30 p.c July '95	1 0	650,000	—	Johannesburg.
Johannesburg Par	8 1/2 8 1/2	8 1/2 8 1/2	1 0	12 1/2 % Nov. '93	1 0	21,000	Hand.....	—
Fabiles	10 1/2 11	10 1/2 10 1/2	1 0	30 % July '95	1 0	30,000	Hand.....	8, Old Jewry.]
Jumpers	7 1/2 8 1/2	8 1/2 8 1/2	1 0	25 % July '95	1 0	100,000	Hand.....	120, Bishopsgt st. Wn.]
Kimberley	13 1/2 15 1/2 pm	13 1/2 15 1/2 pm	1 0	—	0 10 0	98,672	Kimberley	19, Finabury circus.
Kimberley Bldph.	35 1/2 35 1/2	35 1/2 35 1/2	1 0	—	1 0	100	Kimberley	21, Drapers-gardens.
Klerksdorp	21 28	25 29	1 0	—	1 0	400,0 0	Klerksdorp	110, Cannon St.
Koffyfontein.....	13 1/2 1 1/2	18/2 21/3	1 0	—	1 0	125,000	Jacobdaal	120, Bishopsgt st. Wn]
Langlaagte Est. G.	6 1/2 6 1/2	6 1/2 6 1/2	1 0	25 p.c. June '95	1 0 0	470,000	Hand.....	59, Holborn Viaduct
Do. Royal	3 1/2 3 1/2	3 1/2 3 1/2	1 0	5 % Sept. '93	1 0 0	100,000	Hand.....	2, Drapers-gardens.
Londale	9/8 11/8	10/- 11/-	1 0	—	1 0 0	115,000	Lydenburg	85, Gracechurch-st.
Leabon-Berlyn ..	8/3 8/3	8/3 8/3	1 0	2/8	1 0	881,233	Lydenburg	110, Cannon-street
London & S. A. Ex.	12 1/2 13 1/2	12 1/2 13 1/2	0 10	3/- Mar. '95	1 0 0	150,000	S. Africa ..	19, Finabury-circus.
Lower Road Port.	7/8 8/8	7/8 8/8	1 0	—	1 0 0	150,000	Viakfont	8, Old Jewry, H.O.]
Luipards Vlei Est.	30/ 31/	32/6 33/6	1 0	6 % Mar. '90	1 0 0	312,003	Hand.....	Warford-court.]
Main Reef (New) G	2 2 1/2	2 1/2 2 1/2	1 0	—	0 10 0	380,000	Hand.....	8, Old Jewry.
Mashon Agency...	31 1/2 31 1/2	32 1/2 31 1/2	1 0	—	1 0 0	100,000	Mashonaid	8, Old Jewry, E.O.
Mass East	3 1/2 3 1/2	7/ 8/	0 10	—	1 0 0	60,000	Manies	Broad Street Avenue
May Con. (New) G	3 1/2 4 1/2	3 1/2 4 1/2	1 0	10 p.c Apr. '95	1 0 0	236,500	Hand.....	4, Lothbury.]
Metropolitan (N) G	2 1/2 2 1/2	2 1/2 2 1/2	1 0	—	1 0 0	75,000	Hand.....	1, Crosby Square.]
Meyer & Charl....	7 1/2 7 1/2	7 1/2 7 1/2	1 0	5 % June, '95	1 0 0	7,887	Hand.....	120, Blsh psgt-st. Wn]
Modderfontein. G.	15 1/2 15 1/2	16 1/2 16 1/2	1 0	—	1 0 0	260,000	Hand.....	Warford-court.]
Montrose	1 1/2 1 1/2	1 1/2 1 1/2	1 0	3/- Feb. '90	1 0 0	70,000	De Kaap ...	65, New Broad-street
Moodies G.&E....	1 1/2 1 1/2	1 1/2 1 1/2	1 0	-4 May '90	1 0 0	243,000	De Kaap ...	8, Old Jewry.]
Mombambi.....	2 1/2 2 1/2	1 1/2 1 1/2	1 0	—	1 0 0	400,000	S E. Africa	Broad-street House,
Namaqua	1 1/2 1 1/2	7 1/2 7 1/2	2 0	2/6 July '91	2 0 0	94,351	Namaquald	34, Leadenhall-blds.
New African	8 1/2 9	9 1/2 9 1/2	1 0	—	1 0 0	190,000	—	82, Eiston Garden.
New Ariston	—	1 1/2 1 1/2	1 0	—	1 0 0	21,183	Klerksdorp	Winchester House.
N.Belgium Land ..	10/ 11/	7/ 9/	1 0	—	0 17 0	167,462	Waterberg.	33, Cornhill.
New Chimes.....	3 3/4 3 3/4	3 3/4 3 3/4	1 0	15 p.c July '95	1 0 0	100,000	Hand.....	8, Old Jewry, E.O.
New Clewer Estate	4 4 1/2	3 1/2 3 1/2	1 0	10 % Feb. '95	1 0 0	100,000	Lydenburg	120, B shopagt st. Wn]
New Cross.....	3 1/2 3 1/2	3 1/2 3 1/2	1 0	5 % Dec. '93	1 0 0	255,000	Langlaagte	120, Bishopsgt st. Wn]
New Gordon.....	8 9/	7/ 8/	1 0	—	1 0 0	404,344	Griguland	110, Cannon-street.
New Heriot.....	10 1/2 11	11 1/2 11 1/2	1 0	50 p.c July '95	1 0 0	100,000	Hand.....	86, Gresham Ho E.O.
New Jagerf.	9 1/2 9 1/2	9 1/2 9 1/2	5 0	10 1/2 Mar. '95	1 0 0	100,000	Transvaal.	5, Cophthal-building
N. Kleinfontein. G	5 1/2 5 1/2	5 1/2 5 1/2	1 0	12 1/2 Apr. '93	1 0 0	81,590	Hand.....	Winchester House
New Louis D'Or. G.	3/- 3/5 3/5	3/5 3/5	1 0	—	1 0 0			
New Primrose...G	8 8 1/2	6 1/2 7 1/2	1 0	25 p.c June '95	1 0 0	278,750	Hand.....	33, New Broad-street
New Rand	1 1/2 1 1/2 pm.	1 1/2 1 1/2 pm	1 0	—	1 0 0	110,000	Hand.....	2, Draper's-gardens.
							Rand.....	Bartholomew-house.

Nigel Deep.....	G	3 3/4	3 3/4	3 3/4	3 3/4	1 0	—	1 0 0	195,000	Hand.....	56, Gresham Ho., E.C.
Nigel Extension.....	G	8/9	9/3	9/3	9/9	1 0	10 1/2 June '95	0 10 0	150,000	Rand.....	3, Old Jewry.
North Sheba.....	G	5/7	5/9	4/9	5/3	1 0	—	—	—	Rand.....	83, London Wall.
Nourse Deep.....	G	6 3/4	7 1/4	6 3/4	7 1/4	1 0	—	1 0 0	375,000	Rand.....	120, Bishopsgt. st., W.
Oceana.....	G	3 1/4	4 1/4	3 1/4	3 1/4	1 0	25/- Nov. '89	1 0 0	326,000	Transvaal	4, Sun Court, E.O.
Oceana Development	G	1 1/2	1 1/2	1 1/2	1 1/2	1 0	—	1 0 0	50,000	Transvaal	4, Sun Court, E.O.
Ophir Concess.....	G	5/8	6/3	5/8	6/6	1 0	—	0 18 6	111,857	E. O. Africa	1, Lombard-street.
Orange F.S.E.....	D	4 1/4	5	4 1/4	5	1 0	10 1/2 July, '95	1 0 0	234,000	Orange F.S.	10, Monck-street.
Orion.....	G	4 1/4	5	3 1/2	4 1/4	1 0	10 1/2 Mar. '95	1 0 0	30,000	Rand.....	8, Old Jewry.
Otto's Kopje.....	D	5/3	5/9	5/6	6/-	1 0	—	1 0 0	417,585	Kilbarley	113, Cannon-st., E.O.
Pearl Central.....	G	1 1/4	1 1/4	1 1/4	1 1/4	1 0	—	1 0 0	188,753	Transvaal	120, Bishopsgt. st., W.
Pardy's Mozambq.....	G	2 3/4	3	2 3/4	2 3/4	1 0	1/- Jan. '93	0 10 0	13,000	E. Africa	Broad St. Avenue.
Pardy's Range.....	G	9/8	10/6	10/-	11/-	1 0	—	0 10 0	—	Rand.....	Broad St. Avenue.
Piggs Peak.....	G	12/3	15/	13/9	16/3	1 0	—	0 17 6	200,201	S. Swaziland	8, Queen-street-place
Piggs Peak.....	G	13/9	16/3	13/9	18/3	1 0	—	1 0 0	6,852	S. Swaziland	6, Queen-street-place
Pietelofs.....	G	1 1/4	1 1/4	1 1/4	1 1/4	1 0	—	1 0 0	140,000	Black Reef	9, Queen-street-place
Pietestroom.....	G	1 1/4	2	1 1/4	2 1/4	1 0	—	1 0 0	339,750	Pietestroom	19, Bury-st., E.C.
President Env.....	G	10/	11/	10/-	11/-	1 0	—	1 0 0	193,225	Transvaal	17, Basinghall Street
Princess Estate G	G	3 1/4	3 1/4	3 1/4	3 1/4	1 0	—	1 0 0	125,000	Rand.....	33, Cornhill, E.C.
Rand Central Ore	G	2 1/4	2 1/4	2 1/4	2 1/4	1 0	25 p.c Aug. '95	1 0 0	15,000	Rand.....	15, Geo. St., Mn. Ho.
Randfontein.....	G	3 1/4	3 1/4	3 1/4	3 1/4	1 0	—	1 0 0	2,000,000	Rand.....	15, Bishopsgt. st., W.
Rand Mines.....	G	3 1/4	3 1/4	3 1/4	3 1/4	1 0	—	1 0 0	312,7 8	Rand.....	123, Bishopsgt. st., W.
Rand-Rhodesia.....	G	2 1/4	2 1/4	2 1/4	2 1/4	1 0	10 p.c. July '95	1 0 0	25,000	Rand Rhodes	19, Finsbury Circus.
Read's Drift.....	D	1 1/4	1 1/4	1 1/4	1 1/4	1 0	—	1 0 0	37,000	Transvaal	19, Finsbury Circus.
Rhodesia Expn.....	G	1 1/4	1 1/4	1 1/4	1 1/4	1 0	—	1 0 0	5,010	M. H. Valley	8, Prince's-street.
Robinson.....	G	3 1/4	3 1/4	3 1/4	3 1/4	1 0	—	1 0 0	350,000	M. H. Valley	28, Austin Friars, E.C.
Robinson.....	G	10 10 1/2	9 1/2	9 1/2	9 1/2	5 0	5 p.c July '95	1 0 0	517,000	Rand.....	8, Prince's-street.
Robinson Randf. n.	G	2 1/4	2 1/4	1 1/4	1 1/4	1 0	—	1 0 0	17,000	Rand.....	8, Old Jewry, E.O.
Rodepoort Deep.....	G	4 1/4	4	4 1/4	4 1/4	1 0	—	1 0 0	100,000	Rand.....	Lothbury, E.O.
Rodepoort (Klm.).....	G	3 1/4	3 1/4	3 1/4	3 1/4	1 0	—	1 0 0	100,000	Rand.....	Warford-court, f.
Rodepoort Ua. G	G	7 1/4	7 1/4	7 1/4	7 1/4	1 0	25 June, '95	1 0 0	130,000	M. H. Rand	30-31, S. Swin's lane.
Ross Deep.....	G	6 1/4	6 1/4	6 1/4	6 1/4	1 0	—	1 0 0	300,000	Krugerpad	4, Tokenhouse bldgs.
Rosebuck T. His	G	2 1/4	2 1/4	2 1/4	2 1/4	1 0	—	1 0 0	60,000	Rand.....	98, Gr. Swan H., BO
Rothery block.....	G	2 1/4	2 1/4	2 1/4	2 1/4	1 0	—	1 0 0	90,000	Rand.....	18, S. Helen's place.
Salisbury Gold.....	G	5 1/4	5 1/4	5 1/4	5 1/4	1 0	1/- Sept. '94	1 0 0	500,000	Lydenburg	4, Sun Court, E.O.
Sheba.....	G	2 1/4	2 1/4	2 1/							

POLBERG.—The bottom of the shaft is in tough, hard capel, which prevents our making the usual progress in sinking. The capel yields tin, copper ore, and mundaic, the shaft at the present time, and for the last ten fathoms' sinking, yielding on an average 10 to 20 lb. tin to the ton. We purpose continuing to sink the shaft for the present towards the junction of Chappel's Doweright and the Pink lodes, which, providing the underlie of the former continues the same as where last seen at the 26 fathom level, should be met with in about 5 fathoms farther sinking. The junction of these two lodes, taken in connection with the falling in of the several branches passed through in the shaft on the Pink lode, can scarcely fail to give most satisfactory results. We are making the usual progress in driving the 26 crosscut north. There is no change in any other part of the mine. (Signed) Charles Thomas, John Harner.

DEVON GREAT CONSOLS.—William Clemo, August 8: Wheel Anna Maria. Engine shaft. In the slope in the bottom of the 110 fathom level east there is a productive lode, yielding 11 tons mundic per fathom. In the slope in the back of the 110 fathom level east there is a good lode yielding 8 tons of copper ore and 4 tons mundic per fathom.—Field shaft, south lode. The slope in the bottom of the 130 fathom level west is producing 10 tons mundic per fathom.—Wheel Josiah. Field shaft. The slope in the back of the 130 fathom level east is producing 5 tons of mundic per fathom.—Richards shaft. The slope in the bottom of the 115 fathom level east is yielding 5 tons of mundic per fathom.—Hitchins shaft. In the slope in the bottom of the 115 fathom level west the lode is also yielding 5 tons of mundic per fathom. In the slope in the back of the 103 fathom level west the lode will produce 4 tons of copper and mundic ores per fathom.—Wheel Emma. Thomas's shaft. In the slope in the back of the 130 fathom level east the lode is yielding 9 tons of mundic and 1 ton of copper ore per fathom. The slope in the bottom of the 100 east is also yielding 9 tons of mundic and 1 ton copper ores per fathom. In the slope in the bottom of the 100 fathom level east No. 2 there is a productive lode, yielding 18 tons mundic and 1 ton of copper ore per fathom. The slope in the back of the 100 fathom level east will yield 9 tons mundic and 1 ton copper ore per fathom.—Inclined shaft. The slope in the back of the 150 fathom level east will produce 4 tons mundic and 1 ton copper ore per fathom. The slope in the back of the 137 fathom level west is yielding 2 tons of copper ore and 2 tons mundic per fathom. The slope in the back of the 112 fathom level west is producing 4 tons mundic and 1 ton copper ore per fathom. The slope in the back of the 100 fathom level west is turning out 3 tons mundic per fathom.—New shaft, new south lode. The slope in the bottom of the 130 east will turn out 3 tons mundic and 1 ton copper ore per fathom. The slope in the bottom of the 130 fathom level east No. 2 is also yielding 3 tons of mundic and 1 ton of copper ore per fathom.—Watson's engine shaft. In the 172 east the lode is large, 5 feet wide, consisting of capel, quartz, and a little copper and mundic ores. In the 148 east there is a promising lode, 4 feet wide, yielding 3 tons of copper and mundic ores per fathom. In the slope in the back of the 172 east the lode will yield 5 tons of copper and mundic ores per fathom. The slope in the back of the 160 west is yielding 6 tons of copper and mundic ores per fathom. The slope in the bottom of the 148 east is producing 4 tons copper and mundic ores per fathom. The slope in the bottom of the 133 west is yielding 6 tons of copper and mundic ores per fathom. We shall sample to-morrow at Morwellam 330 tons copper ore for sale at Redruth on 22nd inst.

FOXDALE (Isle of Man).—August 1: Beckwith's engine shaft. We shall resume sinking this shaft below the 275 fathom level in a day or two.—275 fathom level. The lode in the end driving west has been changeable and irregular in value during the past month: at present it is producing from 15 to 20 cwt. lead ore per fathom. The winze from the 260 has been communicated with this level. The east end, I am pleased to report, has improved, now yielding fully 3 tons lead ore per fathom.—260 fathom level. There is no particular change in the value of the end driving west on the south portion of the lode, which continues to yield 30 cwt. lead ore per fathom. The lode in the east forebreast is producing about 20 cwt. lead ore per fathom, and, on the whole, looking more promising than for some time past.—245 fathom level. The lode in the east end is improving, now worth 1 ton lead ore per fathom. 230 fathom level. At present the lode in the end driving east is unproductive.—215 fathom level. We are now engaged crosscutting the east level north and south to prove the lode. In all the ends driving east in the upper part of the mine (with the exception of the 155 fathom level on the north lode, which is now yielding 2 tons of rich silver lead ore per fathom) there is nothing new to report.—Bawden's engine shaft. I am pleased to say the necessary repairs to the top part of the shaft are completed, and everything has been done in a substantial manner.—Pott's shaft. Fair progress continues to be made in sinking below the 170 fathom level.—Surface. Notwithstanding the scarcity of water to properly carry on the dressing operations, we have fortunately succeeded in maintaining our quarterly returns of lead ore—viz., 1200 tons.—W. H. Kitto.

LEADHILLS.—W. H. Paull, August 5: Brown's vein. In the 160 fathom level driving north of Jeffrey's shaft the vein is 4 feet wide, carrying a good mixture of spar with a small branch of lead ore for some days past, but it is out out to-day. The vein in same level going south of Wilson's shaft continues soft and unproductive. In winze sinking below the 145 fathom level north of Jeffrey's shaft, the vein is composed chiefly of quartz and stone; no ore to value. The stopes over the 145 and 115 fathom levels north of Jeffrey's shaft are producing on an average 25 cwt. of ore per fathom. The vein in the 100 fathom level driving south of Wilson's shaft, contains a more kindly spar than of late, and ground rather lighter in character but soft. There is no alteration worthy of remark in any of the other bargains on this vein.—Ralk and Highwork veins. The crosscut eastward at the 100 fathom level is being pushed ahead at a fair rate, and now in pretty clean ground. In the 100 fathom level going north of this crosscut the portion of vein carried (4 feet) is worth 40 cwt. of ore per fathom. The crosscut at this point should now be within a short distance of reaching Highwork vein, and I would recommend leaving two men to continue same, and the other five men to drive out the 100, north and south of the crosscut, on the most productive part of the vein passed through there. Other points are without any notable change. We are having heavy rains these days, and the reservoir is filling rapidly.

TINCROFT.—August 2: In the 342 fathom level west of crosscut east of Martin's east shaft, there is no change worthy of notice. We have resumed the sinking of Martin's east shaft below the 342 fathom level by nine men; we shall urge the sinking of this shaft with all speed. In the 330 fathom level crosscut west of Martin's east shaft, we have met with a branch which indicates we are very near the lode. In the 270 fathom level crosscut east of Martin's east shaft, we are also in the influence of the lode. In Harvey's engine shaft sinking below the 320 fathom level, the lode is producing saving work for tin. In the 330 fathom level driving west of Downright shaft, the lode is large and producing a little tin.—Dunkin's lode. In the 320 fathom level driving west of Downright shaft, the lode is very large, and worth for tin £12 per fathom.—North Tincroft. In the 174 fathom level west of No. 1 winze east of Willoughby's shaft, the lode is worth for tin and arsenic £18 per fathom. In the No. 2 winze sinking below the 164 fathom level east of Willoughby's shaft, the lode is worth for tin and arsenic £20 per fathom. In the winze sinking below the 145 fathom level east of Willoughby's shaft, the lode is worth for tin and arsenic £14 per fathom. In the 120 fathom level east of Willoughby's shaft, the lode is worth for tin and arsenic £12 per fathom. In the 100 fathom level east of Willoughby's shaft, the lode is worth for tin and arsenic £10 per fathom. There is no change in the 154 fathom level east of Tyrie engine shaft since last reported.—(Signed) Wm. Teague, John Hamill, George Nancarrow.

COLONIAL, INDIAN, AND FOREIGN MINES.

ALMADA AND TIRITO.—Report for the fortnight ending July 13:—Dios Padre. The lode in the 250 feet level driving north continues without ore and is very small.—Guadalupe. Owing to the recent rains the sides of the No. 1 shaft have become somewhat broken in parts, making it necessary to secure them. Within the next three or four days we shall commence sinking again, and with the new whim we shall no doubt make good progress. We are breaking quartz and gangue containing eyes of black ore in the No. 2 shaft, which is no doubt the Europa lode. This lode at this point is almost touching the main lode. We are clearing an old shaft (No. 3) near the southern extremity of our property. It is about the same distance east of the lode as the other shafts and opposite to some extensive old workings. The depth is unknown; we have cleared to 90 feet. The lode in the tunnel is well defined, containing a very congenial-looking quartz 2 feet wide.—Stopes. There are yielding small quantities of good grade ore.—(Signed) J. La Nue.

NEW CHIMES.—Result of last month's crushings yielded 2199 ounces of gold.

ALAMILLOS.—Mine report dated July 31: In the 85 fathom level driving west of Taylor's engine shaft lode is small, and contains but little ore. The lode in the 160 west of the same shaft continues to turn out good stones of ore, and is estimated at $\frac{1}{2}$ ton per fathom. In the 100 east of Judd's engine shaft the lode looks kindly, but has fallen off in value, being now estimated at $\frac{1}{2}$ ton per fathom. Andre's winze below the 20 fathom level is still opening up stopping ground, worth 1 ton per fathom, Jose's winze sinking below the 50 fathom level. This winze is situated to the west of San Felipe's shaft, and is going down in a large and strong lode, valued at 2 tons per fathom. Sanz winze sinking below the 60 fathom level, valued at 2 tons per fathom. This winze is situated west of San Felipe's shaft and below the above named winze. The stopes continue to yield well. Surface works are going on very regularly and the machinery is in good working order. Estimated raisings for August 250 tons. The tributer's returns in the past month amounted to 39 tons of mineral.

BREMNAES GOLD.—The following reports have been received from the manager, Mr. John Daw, Jan., dated Haugesund, August 2 and 5, respectively:—In confirmation of our previous reports, we have now to advise having crushed a small quantity of quartz, as a test crushing from the different points under development in section 5, with result: 71 tons gave 21 ounces, or about 6 dwts. to the ton, and 8 tons from section 5 gave 33 ounces, or a little over 9 dwts. to the ton. We consider this result satisfactory, inasmuch as it shows first the development in the first-named section is a decided improvement on previous workings, and, secondly, we appear to have a very good property in section 5. It is, as we have stated before, a case of developing the property up to the point from which regular and increasing returns can be made. To do this takes time and money, considering the very large extent of property under our control. We think our reports have been sufficiently explicit in showing that we are only on development work, and that the present returns are what may be called a sample taken from the different workings. We intend to increase the staff of miners in section 5 at an early date, and at the same time push ahead all work in section 4 as fast as circumstances will permit. In calling attention to the different points attacked the alteration from week to week is not very great, but for your guidance we send them weekly. Section 4, 400 feet level, quartz 16 inches wide, assaying $\frac{1}{2}$ ounce of gold to the ton. This lode has been difficult to follow, as it has been influenced by a strong crosscourse, and also a depression in the lode, which has caused it to wind about in a serpentine manner. We should now be getting under the old shale of rich rock followed from the 100 feet level down to the crosscourse referred to, and although the present quartz shows a good deal of mineral and some free gold, we are inclined to think the shale has been thrown north. The lode in the level is strong and well defined, and the men are making good progress 300 feet level winze in bottom sinking to level below the lode for several days owing to a depression in the strata entirely disappeared, but we are glad to report that we have passed through the depression, and the lode is now 4 feet wide, carrying 6 inches of quartz, assaying 5 dwts. to the ton. We think we shall be able to report a further improvement next week. Rise and stopes in back of this level quartz averages about 8 inches. Here the lode has also been twisted about, the quartz being sometimes on the foot and sometimes on the hanging-wall. Assay value, 4 dwts. Level south shows 2 feet of quartz, assaying 3 dwts. This level will soon improve.—200 feet level. Last week we reported that the lode was disturbed, viz., the quartz and lode matrix being so intimately mixed as to make separation of the quartz very difficult. We are glad to be able to report it has greatly improved, the quartz being about 9 inches wide, assaying 4 dwts. This is somewhat lower than before, but we take that it is only one of the ups and downs generally met with in working a mine. We are laying the pipes from the air main so as to start a drill here as early as possible. Stopes in back of this level north shows 12 inches of quartz, assaying 6 dwts. 80 feet level south, quartz 18 inches wide, assaying $3\frac{1}{2}$ dwts. We have suspended the rise in back, as the quartz was almost squeezed out of the lode, and the gold with it. Other points show no alteration.—Section 5. Stopes in back of level quartz 8 inches, assaying $\frac{1}{2}$ ounce to the ton. On the surface near the lower workings we have had a man prospecting on some surface outcroppings, and he has panned from some of the decomposed matrix in the crevices about an ounce of apparently alluvial gold, as under the microscope many of the small coins have a much worn appearance.—The manager reports, under date August 5: On Saturday last we examined some of the stuff we have broken from a point on section 5 (new property), where we had put some men to rise about 50 feet beyond the stopes in back of level, which gave a mill return of 9 dwts. The inspection showed a lode about 4 feet wide, whereof nearly a foot was solid quartz. From this point we took a sample for further examination in the assay office. After this quartz was washed we discovered that it was impregnated with fine gold, and will assay from 1 to 2 ounces to the ton. Now, ounces are better than pennyweights, and I believe that when the property is thoroughly explored that ounces will prevail. With stamps running full time 3 to 4 dwts. will cover all expenses.

CONSOLIDATED GOLD MINES OF WESTERN AUSTRALIA.—Coongan Mines. Extracts from letter received from Mr. Marsh, dated June 3: Underlay shaft has been extended 13 feet 6 inches, total distance 211 feet 6 inches. The lode in the face is 4 feet thick, but is not well-defined on the south side of the shaft. On the north side the lode looks very well, and there is a good hanging wall.—75 feet level. The lode is of fair average quality, about 1 ounce to the ton, and 4 feet in thickness. At this level we have a very fair body of ore on which to work.—150 feet level. The lode in this level keeps to the footwall, and varies from $\frac{1}{2}$ to 2 feet in thickness, value 25 dwts. to the ton.—Quartz at surface. We have now 200 tons at surface, which I think will yield nearly 1 ounce of gold per ton. This is only from development work, and not from stoping.—Machinery. Most of the heavier parts are now on the mine, and foundations are being excavated.—Nicol Mines. Extract from a letter received from Mr. A. S. Roe, dated June 22:—The Great Chirrita lode and Westward Ho, on which the principal work has been done, are opening up well. The reef or lode is, however, not quite so wide as at first, when it averaged, as near as we could estimate, about 4 feet. It is now of an average of about 2 feet 6 inches to 3 feet, varying in thickness. I think that a very large body of stone will be found to run through the Lord Byron when that property is opened up properly. Four men are putting down a shaft to water level on this property.—Machinery. This has arrived in splendid order, and is now all in Roebourne.—Battery area. This is situated on the only available spot for some distance around, and is on a small rocky spur running into the Oriental lease. A very fair fall has been obtained, although a little more would have been better. Given no unforeseen accident, the machinery should be nearly ready by October 1 next.—Mallina Mines. Report from the manager, dated June 7:—West Mallina. The shaft is now down below water level, and is 54 feet deep from brace. Drive from old shaft into new shaft is now completed, and is 70 feet in length. Water in the old shaft was struck at 44 feet. In the new shaft a body of stone was struck at the 44 feet level. The reef is well defined, and is about 18 inches in thickness. Right down at the bottom of the shaft the stone has improved, but on account of there being no appliances at hand, I cannot sink to a further depth, and have now started to drive along the reef to open it. The stone struck is very similar to the Mallina Company's gold-bearing stone, and I am sanguine that I may be able to send you news that a shoot of gold has been struck.—East Mallina. The shaft in which work is being carried on is 45 feet deep from brace, and at this level the reef is 2 feet thick, carrying gold. The reef is underlying to the south-east.—East Mallina Extended. The working shaft is down to water level, and a drive is in 31 feet. There are several small leaders in this drive, crossing it. As progress is being made on this drive, the country is getting softer, and I anticipate striking the reef before long. With the appliances at hand it is impossible to go below water-level.

D'ARCY ESTATES.—Report dated June 29: Main shaft, total depth 442 feet; progress for the week 10 feet.

OOREGUM.—Superintendent's report for fortnight ending July 15: Taylor's shaft sunk 9 feet, total 31 feet below the 760 feet level. Lode 4 feet 6 inches wide, assay value 3 ounces 8 dwts. 21 grains. The 760 feet level south driven 32 feet 6 inches, total 112 feet 6 inches. Lode 3 feet wide, assay value 4 ounces 1 dwt 15 grains. The 760 feet level north driven 13 feet 6 inches, total 63 feet. Lode 2 feet wide, assay value 2 ounces 6 grains. The 660 feet level south driven 13 feet, total 354 feet 6 inches. Lode 9 inches wide, assay value 1 ounce 6 grains. No. 1 winze 660 feet level south sunk 4 feet 3 inches, total 40 feet. Lode 2 feet 6 inches wide, assay value 3 ounces 8 dwts. 21 grains. No. 2 winze 630 feet level south sunk 5 feet, total 19 feet 9 inches. Lode 3 feet 9 inches wide, assay value 1 ounce 17 grains. The 560 feet level south driven 1 foot, total 533 feet 6 inches. Lode 1 foot 4 inches wide, assay value 2 ounces 6 dwts. 19 grains. No. 2 winze 560 feet level south sunk 2 feet, total 68 feet 6 inches. Lode 3 feet wide, assay value 1 ounce 1 dwt. 19 grains. No. 3 winze 560 feet level south sunk 5 feet, total 45 feet 6 inches. Lode 1 foot 9 inches wide, assay value 4 dwts. 8 grains. No. 4 winze 560 feet level south sunk 5 feet 9 inches, total 16 feet 6 inches. Lode 1 foot 6 inches wide, assay value 1 ounce 12 dwts. 16 grains.—Wallroth's shaft. The sinking below 1060 feet level was resumed yesterday, also cutting flat at this level. The 1060 feet level south driven 15 feet 3 inches, total 30 feet 3 inches. Lode 6 inches wide, assay value 9 dwts. 21 grains. The 1060 feet level north driven 12 feet 9 inches, total 23 feet 9 inches. Lode 6 inches wide, assay value 8 dwts. 17 grains. The 960 feet level south driven 21 feet 9 inches, total 253 feet 9 inches. Lode 3 feet wide, assay value 7 dwts. 15 grains. No. 1 winze 960 feet level south sunk 6 feet, total 33 feet. Lode 3 feet wide, assay value 5 dwts. 10 grains. The 960 feet level north driven 11 feet 6 inches, total 126 feet 9 inches. Lode 4 inches wide, assay value 6 dwts. 12 grains. The No. 1 rise 960 feet level north risen 4 feet 6 inches, total 19 feet. Lode 1 foot wide, assay value 3 dwts. 6 grains. Communicated with No. 1 winze, 860 feet level north. No. 1 winze, 960 feet level north, sunk 6 feet, total 14 feet. Lode 1 foot 6 inches wide, assay value 5 dwts. 10 grains. The 860 feet level south driven 21 feet 9 inches, total 573 feet 3 inches. Lode small, no sample. No. 2 winze, 860 feet level south, sunk 4 feet 9 inches, total 62 feet. Lode 1 foot 6 inches wide, assay value 10 dwts. 21 grains. No. 3 winze, 860 feet level south, sunk 6 feet, total 32 feet 6 inches. Lode 2 feet wide, assay value 6 dwts. 12 grains. No. 4 winze, 860 feet level south commenced sunk 5 feet. Lode 1 foot wide, assay value 5 dwts. 10 grains. The 860 feet level north driven 11 feet 9 inches, total 318 feet 3 inches. Lode contracted, no sample. No. 1 winze, 860 feet level north, sunk 3 feet 9 inches, total 83 feet 3 inches. Lode 1 foot wide, assay value 7 dwts. 15 grains. The 760 feet level south driven 34 feet, total 744 feet. Lode 9 inches wide, assay value 8 dwts. 17 grains. No. 2 winze 760 feet level south sunk 3 feet 9 inches, total 59 feet 9 inches. Lode 1 foot 6 inches wide. No sample. No. 3 winze 760 feet level south sunk 5 feet 3 inches, total 17 feet 3 inches. Lode 1 foot 6 inches wide, assay value 10 dwts. 21 grains. The 760 feet level north driven 20 feet 6 inches, total 391 feet 6 inches. Lode 1 foot wide, assay value 9 dwts. 19 grains. No. 2 winze 760 feet level north sunk 4 feet 6 inches, total 13 feet 3 inches. Lode 1 foot 3 inches wide, assay value 2 dwts. 4 grains. No. 5 winze 215 north sunk 4 feet 9 inches, total 55 feet 6 inches. Lode 1 foot wide, assay value 6 dwts. 12 grains. Low's shaft sunk 5 feet, total 730 feet 4 inches. The 710 feet level south driven 12 feet, total 48 feet 6 inches. The 610 feet level south driving north on lode from point of intersection, driven 15 feet, total 123 feet. Lode 10 inches wide, assay value 1 ounce 9 dwts. No. 1 winze 610 feet level south sunk 8 feet 6 inches. Lode 2 feet 6 inches wide, assay value 3 ounces 13 dwts. Probyn's shaft sunk 5 feet 6 inches, total 1119 feet 6 inches. The 1050 feet level south driven 13 feet 6 inches, total 108 feet. This is still being driven under the crosscourse. From the position of lode at the 950 feet levels we ought very soon to intersect it in this drive. No. 1 winze 1050 feet level north sunk 1 foot 6 inches, total 45 feet. Lode 4 inches wide, assay value 2 ounces 7 dwts. 21 grains. No. 1 winze 950 feet level south sunk 1 foot 6 inches, total 86 feet 6 inches. Lode 10 inches wide, assay value 6 dwts. 12 grains. Throughout the mine we are working 60 stopes, which are yielding quartz of the average quality. During the month of June we crushed 4540 tons of quartz, which produced 5349 ounces of gold. In addition to this 4897 tons of tailings were treated, which yielded 963 ounces of gold. Total return 6012 ounces of gold.

PUNJOM.—The secretary of the Panjom Mining Company (Limited) advises the receipt of the following report for May from Mr. Blamey, the manager at the mine:—Mining. August shaft, 200 feet level. Good progress has again been made in driving the No. 2 crosscut, 65 feet having been driven, making its total length from the main north crosscut 353 feet. A few days ago we came up to a course of broken reef matter, showing specks of free gold, but as it is lying at a very low angle (about 25°), and is enclosed in very broken country rock, I cannot own it as Gillies reef. We shall continue driving east as hitherto, until we are sure that the course of that reef has been reached, when, if nothing of value is found, drives will be opened up on the course of the ore already passed through.—Intermediate, 140 feet level. There is no change to report here, the stopes, &c. still giving the usual quantities of low grade ore. The drive going out to the new shaft has reached its destination and is ready for the shaft when it comes down.—110 foot level. The new shaft having been repaired from the surface to this level, a contract has been let to continue it down to the intermediate.—Upper stopes. We continue to do a little in these, and get a small quantity of ore for the mill. Early in the month we found a small leader in the north side of these stopes which has given us a few tons of very fair ore indeed but, as its course has been well prospected below the soft level, it cannot be persistent in depth.—Gillies reef, Mill gully tunnel. The north drive here has been connected with the workings at the Kladi tunnel, and is now being continued still further north. The reef, although not strong, has given some fair grade ore for the mill. A winze is being sunk below the bottom of this tunnel on the first chute of ore found and fairly good ore is being got. But I notice the Black dyke seen in driving is met with in sinking also, and is still interfering with the reef; in fact, it seems to cut it off altogether. What is really going to happen, however, can only be proved by further development.—Kladi tunnel. The work we were carrying on here is now being done by means of the Mill gully, and in future will be dealt with when reporting on that point. Total drive for the month, 571 feet 3 inches; ore mined, 781 tons, made up as follows:—Upper stopes, 80 tons 10 cwt.; August shaft, 526 tons; Mill gully, 140 tons; New leader, 34 tons 10 cwt.—Milling. This was carried on during 27 days, crushing 1191 tons 10 cwt., yielding 427 ounces 3 dwts. 7 grains of smelted gold, viz.: 781 tons 10 cwt.; ore from the mine for 382 ounces 3 dwts. 7 grains, and 410 tons headings for 45 ounces.—Cyanide works. This was sufficiently advanced to allow of operations being commenced on the 18th inst., and is now working continuously. It is running on the heap of old tailings, and the results will be watched with interest. I may tell you that the arrangements for filling and emptying the vats are very complete, the total cost of both operations not exceeding 4d. per ton.—General. All works coming under this head continue to receive due attention. About 2459 feet of new roads have been made into the jungle for bringing our firewood and mine timber, and the main water race has been widened and repaired where necessary.—Labour. The supply of this is better, many new hands having come in during the month.—Health. This, I regret to say, is not very good, a kind of influenza and bronchitis having broken out among both Europeans and natives.—Rainfall. During the month the rainfall was 89.16 inches.

WENTWORTH EXTENSION.—Report dated June 29: Main shaft, Carrol No. 2, total depth 67 feet; progress for the week 5 feet. Formation continues hard with small flow of water.

AUSTRALASIAN.—Fortnightly report of Mr. John James, dated June 21: For the past fortnight Bishop's party have sunk the shaft 30 feet, total 280 feet. There is no change in the country sunk through, but the rock is harder than it has been, and breaks smaller. You will see by my last report that there were 3 feet sunk last fortnight included in this measurement. No timbering has been done this fortnight; the water keeps about the same. I had the boiler and steam pipes covered with a coating 3 inches thick; this will make a great saving in fuel.

BRITISH BROKEN HILL PROPRIETARY.—Mining manager's report for nine days ending June 29: Blackwood (No. 1) shaft, 200 feet level. A west crosscut has been started from a point 40 feet down winze in No. 1 west crosscut, and driven 5 feet through low grade sulphides of a very hard nature so far. This is stopped for the present, and an easterly crosscut has been started from the winze in order to prove the country in that direction, where it looks more favourable. The winze started in western extension was sunk 28 feet, all the way through carbonate ore of fair grade. 38 tons were broken in sinking, which assayed 24 per cent. lead and 18 ounces silver per ton.—Howell (No. 2) shaft, 300 feet level. West crosscut from plat was extended 7 feet, total 71 feet; face still in extremely hard low grade sulphides and garnets.—240 feet level. Winze in east crosscut below far north stopes was sunk 10 feet, total depth 30 feet; bottom in a mullock intrusion. We have timbered up about 20 feet of winze during the week; 6 tons sulphides were mined from here, which assayed 27 per cent. lead, 6 ounces silver, and 18 per cent. zinc.—Marsh (No. 6) shaft, 2nd level. The No. 2 tributaries working on this level mined 25 tons carbonate, assaying 20 per cent. lead and 42 ounces silver per ton. From winze stopes down west crosscut we mined 69 tons carbonates, assaying 24 per cent. lead and 47 ounces silver per ton.—Junction 300 level. North east drive was advanced 19 feet, total length 52 feet, face showing small patches of sulphide ore.—Ore shipments. The following first-class carbonate ore from Marsh (No. 6) shaft has been delivered and sold to Block 14 Company at Port Adelaide, viz.: 463 tons net, containing 98 tons lead and 26,695 ounces silver. The week's assays vary: carbonates from 14 to 41 per cent. lead and 98 to 134 ounces silver per ton, and sulphides from 23 to 31 per cent. lead, 12 to 23 1/2 per cent. zinc, and 4 1/2 to 14 1/2 ounces silver per ton.

BRILLIANT BLOCK.—Mining manager's report for fortnight ending June 12: Underlie shaft sunk 9 feet, total below 7 level 72 feet. Reef is sunk 4 feet, 15 dwts. 7 level west driven 10 feet on footwall, total 70 feet. Reef 1 foot, poor stone. Stopes behind drive. Reef 2 feet, 10 dwts. 7 level east driven 28 feet, total 216 feet from shaft. Reef 4 feet, 17 or 18 dwts. In stopes reef 6 inches to 4 feet, 16 to 20 dwts.—6 level west. In two stopes near shaft reef 3 feet, 17 to 20 dwts. In the two other stopes at No. 2 winze reef 2 feet, 10 dwts.—6 level east. There are eight stopes being worked over this level. Reef 2 to 5 feet, 18 to 26 dwts.—5 level east. In the stopes over the level reef is 2 feet, 18 dwts.—Flat reef. Four stopes, 6 inches to 2 feet of reef, 1 ounce quality.—4 level west. Reef on stopes 1 to 2 feet, 16 dwts.

CHIAPAS.—Mining report for fortnight ending June 30: Providencia Ader driven 30 feet, total 312 feet; struck dyke in back of level in end. Providencia Ader rise No. 2 driven 3 feet, total 36 feet; south end in fairly good ore; north end poor. Santa Fé hill driven 3 feet 6 inches, total 94 feet 6 inches; no change immediately over west side of old Santa Fé stopes. Crosscut San Juan driven 5 feet, total 18 feet; no change. Pine Creek No. 3 driven 18 feet, total 98 feet; no change. Pine Creek No. 2 driven 18 feet, total 98 feet; no change. Sylvia crosscut No. 3 driven 6 feet, total 33 feet; no change. Taylor main extension driven 3 feet 6 inches, total 646 feet; no change. Taylor No. 3 holed into winze at about 20 feet from brace; last 3 feet out of ore into white wollastonite.—Extraction. Santa Fé hill 31 tons; very good ore. Santa Fé stopes 254 tons; below former average. Old Providencia 329 tons; very good ore.—Providencia Ader. Rise No. 2 126 feet; roughly sorted ore.—(Signed) Edward T. McCarthy.

COROMANDEL.—Superintendent's report for fortnight ending July 13: Prospect shaft. Crosscut east from 500 feet level south. This has been suspended and the machine placed to drive north on a vein of quartz discovered in this drive; 17 feet has been driven, and the quartz in present end is 2 feet wide, and assays 1 dwt. 6 grains of gold per ton. Winze bottom 500 on new shoot sunk 18 feet, total 26 feet. Lode 1 foot 6 inches wide, assaying 12 dwts. 12 grains of gold per ton. Rise back 440 west of dyke risen by hand labour 5 feet, total 117 feet. Lode in back 2 feet 6 inches wide of good looking quartz, which assays 7 dwts. 12 grains of gold per ton. 320 north of rise on new shoot driven 23 feet, total 103 feet from rise. Lode 3 feet wide, assaying 8 dwts. of gold per ton. 320 south of rise on new shoot driven 17 feet, total 56 feet. Lode pinched to 6 inches wide, and worth 2 dwts. 12 grains of gold per ton. Rise back 320 on new shoot risen 16 feet, total 100 feet above level. No quartz in back, lode having folded into the footwall. The rise is being continued to communicate with the 200 feet level, which is about 20 feet above 200 feet level north on new shoot driven 42 feet, total 100 feet from crosscut. Level is 5 feet wide and no walls are visible. Assay value of quartz 1 ounce of gold per ton. 200 feet level north, west of dyke, driven by hand labour 5 feet 3 inches, total 39 feet from crosscut. Lode 1 foot 6 inches wide, assaying 15 dwts. of gold per ton.—New east shaft. This shaft has been sunk 20 feet, and its total depth is now 80 feet from surface.—Trial shaft, 100 feet level south. This has been driven by hand labour 6 feet 6 inches. For such a shallow depth the ground is extremely hard, and we consider the lode so promising in appearance that during the coming fortnight a machine drill will be substituted for the hand drilling hitherto employed.

CRAYEN'S CALEDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, June 20: The reef is the underhand stopes from No. 9 level is about 7 inches thick. In the three stopes over No. 9 level the reef is about 7 inches thick also. The No. 8 level on Crayen's reef has been extended a further 9 feet, making a total of 392 feet from the fault. About this distance I intend to turn into the hanging-wall and crosscut for the hanging reef. The level on the hanging-wall reef in No. 8 has been extended a further 8 feet, making a total of 99 feet from the end of the crosscut, and there are about 7 or 8 inches of stone in the face. In the underhand stopes from this level there are about 7 or 8 inches of stone, but in the other stopes the reef will average about 10 inches. The haulage of quartz for the fortnight is 100 tons, making a total of 253 tons towards the present crushing.—(Signed) G. Cabassi.

CHAMPION REEF.—Mining manager's report for fortnight ending July 15:—Dalyell's shaft. This has been sunk 10 feet 9 inches, total depth 726 feet 3 inches. This is now communicated to 740 south rise/Garland's.—Garland's shaft. The 940 north level has been driven 7 feet 9 inches, total length 33 feet 6 inches. Lode 2 feet, assaying 1 ounce 16 dwts. 15 grains of gold per ton. The 940 feet level south has been extended 6 feet 9 inches, total length 34 feet 3 inches. Lode 2 feet, assaying 1 ounce 17 dwts. of gold per ton. We had a slight influx of water in the 940 south end, which necessitated work being suspended for a few days. Work is now resumed here again. The 840 feet level north has been driven 23 feet 6 inches, total length 414 feet 9 inches. Lode 5 feet, assaying 1 ounce 16 dwts. 12 grains of gold per ton. No. 2 rise in back of level risen 18 feet, total height 91 feet. Lode 3 feet 6 inches, assaying 1 ounce 4 dwts. 9 grains of gold per ton. The 840 feet level south has been driven 16 feet 3 inches, total length 447 feet. Lode 2 feet 6 inches, assaying 1 ounce 3 dwts. 16 grains of gold per ton. We have suspended the driving of this level preparatory to its being surveyed. No. 3 rise in back of level risen 19 feet 3 inches, total height 33 feet 9 inches. Lode 3 feet, assaying 2 ounces 2 dwts. 10 grains of gold per ton. No. 2 rise in back of level risen 9 feet 6 inches, total height 90 feet. Lode 1 foot 6 inches, assaying 1 ounce 3 dwts. 14 grains of gold per ton. The 740 feet level north has been driven 22 feet 3 inches, total length 626 feet 3 inches. No change here yet. Rise above 740 south has been risen 10 feet 6 inches, total height 28 feet 3 inches. Communicated with Dalyell's shaft. The 630 feet level north has been driven 25 feet 9 inches, total length 742 feet 6 inches. Lode 3 feet 6 inches, assaying 1 ounce 1 dwt. 19 grains of gold per ton. No. 6

rise in back of level risen 10 feet 6 inches, total height 24 feet. Lode 3 feet, assaying 1 ounce 7 dwts. 10 grains of gold per ton. Winze below this level sunk 21 feet 6 inches, total depth 74 feet. Lode 3 feet, assaying 1 ounce 22 grains of gold per ton.—Ribblesdale's shaft. No sinking. Commenced to drive north and south at 640 feet. The north level has been driven 16 feet, total length 16 feet. Lode 6 inches, assaying 18 dwts. 20 grains of gold per ton. The south end has been driven 15 feet 9 inches, total length 15 feet 9 inches. Lode 9 inches, assaying 1 ounce 6 dwts. of gold per ton. The 540 south of east crosscut of 530 south of shaft driven 13 feet 3 inches, total length 232 feet 6 inches. Lode 1 foot, assaying 1 ounce of gold per ton. Winze below this level sunk 10 feet 9 inches, total depth 68 feet. Lode 3 feet 6 inches, assaying 1 ounce 9 dwts. 6 grains of gold per ton. Crosscut west from this level driven 15 feet 6 inches, total length 54 feet 6 inches. No change, suspended. Rise in back of level (90 feet south of winze) risen 8 feet, total height 8 feet. Lode 3 feet 6 inches, assaying 19 dwts. 16 grains of gold per ton. Incline winze north of No. 1 west crosscut at 440 south of east crosscut, south of shaft, sunk 13 feet, total depth 119 feet 6 inches. Lode 3 feet, assaying 1 ounce 3 dwts. 14 grains of gold per ton.—Carmichael's shaft. This has been sunk 11 feet 9 inches, total depth below the 540 feet level 25 feet. Lode 3 feet, assaying 1 ounce 2 dwts. 22 grains of gold per ton. The crosscut east of 540 north has been extended 24 feet 6 inches, total length 58 feet; no change. Driving south on east part of fold at 540 north driven 17 feet, total length 21 feet; no sample; suspended. Rise in back of level risen 4 feet 3 inches, total height 4 feet 3 inches. Lode 4 feet, assaying 2 ounces 3 dwts. 21 grains of gold per ton. Incline winze below 440 north sunk 18 feet 6 inches, total depth 41 feet 3 inches. Lode 3 feet 6 inches, assaying 2 ounces 1 dwt. 19 grains of gold per ton.—Rowe's shaft. This has been sunk 6 feet 6 inches, total depth below the 415 feet, 116 feet. Lode 1 foot, assaying 1 ounce 11 dwts. 13 grains of gold per ton. Driving north from bottom of 415 south winze driven 16 feet 9 inches, total length 113 feet 9 inches. Lode 1 foot 6 inches, assaying 1 ounce 2 dwts. 16 grains of gold per ton. Winze below 415 feet north sunk 8 feet 9 inches, total depth 23 feet 6 inches. Lode 1 foot 6 inches, assaying 1 ounce 6 dwts. of gold per ton.—Stopes. Dalyell's shaft. Stope in back of 620 south of 530 south winze cut 5 fathoms 1 foot 3 inches. Lode 2 feet 6 inches, assaying 1 ounce 2 dwts. 16 grains of gold per ton. Stope in back of 620 south of 530 north winze cut 12 fathoms 8 feet. Lode 3 feet, assaying 1 ounce 12 dwts. 12 grains of gold per ton. Stope below 440 south of north winze cut 7 fathoms 1 foot 6 inches. Lode 4 feet, assaying 1 ounce 14 dwts. 11 grains of gold per ton. Stope below 440 north of south winze cut 13 fathoms 1 foot 6 inches. Lode 4 feet assaying 1 ounce 15 dwts. 21 grains of gold per ton.—Garland's shaft. Stope in back of 840 north of No. 1 north rise cut 7 fathoms 9 inches. Lode 3 feet, assaying 1 ounce 6 dwts. of gold per ton. Stope in back of 840 north of No. 1 south rise cut 13 fathoms 5 feet. Lode 3 feet, assaying 1 ounce 2 dwts. 6 grains of gold per ton. Stope in back of 840 south of No. 1 south rise cut 1 fathom 4 feet 6 inches. Lode 4 feet, assaying 1 ounce 9 dwts. 20 grains of gold per ton. Stope in back of 740 north of No. 1 north rise cut 29 fathoms 1 foot 6 inches. Lode 3 feet 6 inches, assaying 1 ounce 12 dwts. 14 grains of gold per ton. Stope in back of 740 south of No. 3 north rise cut 18 fathoms 3 feet 6 inches. Lode 3 feet, assaying 1 ounce 19 grains of gold per ton. Stope in back of 630 south of No. 3 north rise cut 17 fathoms 3 feet 9 inches. Lode 1 foot 6 inches, assaying 6 dwts. 10 grains of gold per ton. Suspended. New stope in back of 630 north of No. 3 north rise cut 5 fathoms 1 foot. Lode 5 feet, assaying 1 ounce 5 dwts. 18 grains of gold per ton. Stope in back of 530 north of No. 7 rise cut 8 fathoms 1 foot 6 inches. Lode 3 feet 6 inches, assaying 1 ounce 2 dwts. 16 grains of gold per ton. Stope in back of 530 south of No. 7 north rise cut 9 fathoms 4 feet. Lode 4 feet, assaying 1 ounce 19 dwts. 2 grains of gold per ton. Stope in back of 530 north of No. 6 north rise cut 5 fathoms 1 foot 3 inches. Lode 4 feet, assaying 1 ounce 12 dwts. 18 grains of gold per ton. Stope in back of 530 north of No. 2 north rise cut 9 fathoms 5 feet. Lode 7 feet, assaying 1 ounce 5 dwts. 17 grains of gold per ton. Stope in back of 530 south of No. 2 north rise cut 5 fathoms 4 feet. Lode 6 feet, assaying 1 ounce 18 dwts. 19 grains of gold per ton. Stope in back of 530, north of south rise, cut 13 fathoms 4 feet. Lode 3 feet, assaying 1 ounce 2 dwts. 16 grains of gold per ton. Stope in back of 440, south of No. 7 north rise, cut 14 fathoms 4 feet. Lode 5 feet, assaying 1 ounce 9 dwts. of gold per ton. Stope in back of 440, north of No. 6 north rise, cut 14 fathoms 2 feet 3 inches. Lode 6 feet, assaying 1 ounce 5 dwts. 10 grains of gold per ton. Stope in back of 440, north of No. 2 north rise, cut 9 fathoms 3 inches. Lode 3 feet, assaying 1 ounce 16 grains of gold per ton. Stope in back of 440, south of No. 2 north rise, cut 6 fathoms 2 feet 9 inches. Lode 4 feet, assaying 1 ounce 8 dwts. of gold per ton. Stope in back of 440, north of rise, south of west crosscut, cut 11 fathoms 1 foot 6 inches. Lode 5 feet 6 inches, assaying 15 dwts. 12 grains of gold per ton. Stope below 340, north of north winze, cut 6 fathoms 2 feet 6 inches. Lode 6 feet, assaying 18 dwts. 14 grains of gold per ton. Stope below 340, south of north winze, cut 6 fathoms 5 feet 9 inches. Lode 6 feet, assaying 1 ounce 14 dwts. 12 grains of gold per ton. Stope in back of 240, north of No. 2 north rise, cut 10 fathoms 5 feet. Lode 3 feet, assaying 1 ounce 5 dwts. 8 grains of gold per ton. Stope in back of 240, south of No. 1 north rise, cut 12 fathoms 9 inches. Lode 2 feet, assaying 1 ounce 13 dwts. 16 grains of gold per ton.—Ribblesdale's shaft. Stope in back of 440, south of No. 2 west crosscut, cut 8 fathoms 5 feet 6 inches. Lode 6 feet, assaying 1 ounce 12 dwts. 22 grains of gold per ton. Stope in back of 440, south of No. 1 west crosscut, cut 7 fathoms 3 feet 9 inches. Lode 6 feet, assaying 1 ounce 14 dwts. 16 grains of gold per ton. Stope in back of 440 south of incline rise south of east crosscut cut 7 fathoms 2 feet 6 inches. Lode 2 feet, assaying 1 ounce 18 dwts. 19 grains of gold per ton. Stope in back of 340 south of No. 2 south rise cut 9 fathoms 1 foot. Lode 3 feet, assaying 1 ounce 14 grains of gold per ton. Stope on fold at 340 north cut 8 fathoms 4 feet 6 inches. Lode 6 feet, assaying 1 ounce 8 dwts. 14 grains of gold per ton. No. 1 stope north of No. 2 rise in back of 240 south cut 9 fathoms 2 feet 6 inches. Lode 3 feet, assaying 1 ounce 16 grains of gold per ton. No. 2 stope north of No. 2 rise in back of 240 south cut 5 fathoms 1 foot. Lode 6 feet, assaying 1 ounce 6 dwts. of gold per ton. No. 3 stope north of No. 2 rise in back of 240 south cut 9 fathoms 4 feet 9 inches. Lode 2 feet, assaying 1 ounce 2 dwts. of gold per ton. No. 2 stope south of No. 1 rise in back of 240 south cut 7 fathoms 5 feet 6 inches. Lode 6 feet, assaying 1 ounce 3 dwts. 16 grains of gold per ton. Stope north of No. 1 rise in back of 240 south cut 9 fathoms 4 feet 9 inches. Lode 2 feet 6 inches, assaying 1 ounce 16 dwts. 14 dwts. of gold per ton. Stope on east part of lode in back of 240 south cut 6 fathoms. Lode 2 feet 6 inches, assaying 1 ounce 16 dwts. of gold per ton. Lode 2 stope below 240 north of north winze cut 1 fathom 4 feet. Lode 4 feet, assaying 1 ounce 5 dwts. 6 grains of gold per ton.—Rowe's shaft. Stope in back of 315 north of south rise cut 6 fathoms 5 feet 3 inches. Lode 4 feet, assaying 1 ounce 12 dwts. 16 grains of gold per ton. Stope in back of 315 south of south rise cut 7 fathoms 3 feet. Lode 4 feet, assaying 1 ounce 22 grains of gold per ton. The above stoping is for June month.

DURBAN ROODEPOORT.—June: Tons milled. Block 2 south reef 5325 tons, Block 2 main reef 100 tons; total, 5425 tons. Block 1 main reef 1425 tons, Block 1 south reef 1525 tons; total, 2950 tons. Total, 8375 tons, producing 3987 ounces. Tailings treated 5930 tons, producing 1867 ounces; total, 5854 ounces.—Summary for month ending June 30:—Block No. 1: Driving. 260 feet level east of shaft and crosscut (Main reef) 45 feet, 260 feet level east of shaft and crosscut (south leader) 9 feet; total driving 45 feet.—Rising. 260 feet level west of shaft and crosscut (south leader) 12 feet.—Sinking. Incline shaft, started from 260 feet level west of vertical shaft, 28 feet.—Summary of work. Total driving 54 feet, total rising 12 feet, total sinking 28 feet; total 94 feet.—Block No. 2: Driving (crosscut). 7th level crosscut south from main incline shaft to cut south leader 51 feet, 7th level east of shaft and crosscut (south leader) 121 feet, 7th level west of shaft and crosscut (south leader) 57 feet, 6th level west of shaft and crosscut (south leader) 58 feet, 6th level east of shaft and crosscut (south leader) 29 feet 6 inches, 6th level from crosscut north (Main reef) level driven west 40 feet; total driving 305 feet 6 inches.—Rising. From 6th level

south leader to 580 feet level west of shaft 11 feet; total rising 11 feet.—Sinking. From 6th level to 7th level (south leader) 95 feet; total sinking 95 feet.—Summary of work. Total driving 305 feet 6 inches, total rising 11 feet, total sinking 95 feet; total 411 feet 6 inches.

GOLD FIELDS OF MYSORE.—Mining report for fortnight ending July 16: Oriental lode, south shaft. The 280 feet crosscut. End driving south on West Balaghat lode has been driven 14 feet, total 15 feet 6 inches. The lode is 4 1/2 feet wide of mixed quartz and black rock, with pyrites thinly disseminated throughout. It is a well-defined lode but the assay value at this point is rather low, being 1 dwt. 17 grains of gold per ton. This, we hope, will improve when further developed. The end driving north has been extended 10 feet, total 11 feet 6 inches. The lode is a little pinched at this point and is now 15 inches wide, assaying 15 grains of gold per ton. The 380 end south has been driven 4 feet 6 inches, total 406 feet 7 inches. The end is still crossing the dyke. The crosscut driving west from the north level has intersected a fault 32 feet from the level, bearing 25° 30' east of north and underlying slightly east. It is letting out a small stream of water, which has necessitated the fixing of a donkey pump at this level. Owing to the quantity of stuff that has accumulated at this level all work will be suspended until the skip-road is finished to surface, which we hope will be accomplished in about 15 days.—Surface. The hoisting machine is ready for working, and the poppet heads will be lifted in a few days. All machinery throughout the mine is working satisfactorily.

KEMPINKOTE.—Superintendent's report for fortnight ending July 15:—Garland's shaft. During the past fortnight we have rearranged our pitwork from the 183 to the 345. I am pleased to say this work is now complete, and have sunk the shaft 4 feet 6 inches, total depth from surface 376 feet 9 inches. Lode in the bottom full width of shaft, showing gold in the pan.—345 crosscut east has been driven 18 feet, total distance from shaft 117 feet. The end is in hard black schist of no value.—245 No. 1 crosscut west. 100 feet north of main crosscut has been driven 8 feet; total distance from footwall 67 feet 6 inches. Lode in the end 4 feet wide, assaying 1 ounce 14 dwts. 2 grains of gold per ton of stuff.—No. 1 crosscut west. 100 south of main crosscut has been driven 22 feet 6 inches; total distance from footwall 85 feet 3 inches. The first part of this drive was driven through ground mixed with lode and schist; 78 feet from footwall it again intersected lode. The lode in the end full width of the drive assaying 1 dwt. 3 grains of gold per ton.—245 south drive has been driven 19 feet 3 inches; total distance from main crosscut 300 feet 9 inches. We are carrying about 5 feet of footwall, part of lode assaying 1 dwt. 13 grains of gold per ton of stuff.—Henty's shaft. During the past fortnight we have put in 20 feet of bucket road, a set of stays around the lift, and have sunk the shaft 5 feet 9 inches; total depth from surface 326 feet 9 inches. The seam of soft schist which came into the shaft from from the hanging wall has passed on to the floor. The bottom of shaft is again in hard rock.—258 north drive has been driven 28 feet 6 inches; total distance 28 feet 6 inches. We are carrying about 4 feet of footwall, part of lode assaying 14 grains of gold per ton of stuff.—173 No. 1 crosscut east. 100 north of shaft has been driven 6 feet; total distance from hanging wall 14 feet 6 inches. Lode full width of drive, assaying 15 grains of gold per ton of stuff.—No. 5 trial pit has been sunk 7 feet 6 inches; total depth from surface 69 feet. No change in the ground in the bottom of the pit.

MOUNT LYELL.—The London board has received the following report from the Melbourne board for week ending June 19: Surface prospecting shaft, hanging wall. The shaft has been sunk 4 feet, total 66 feet. The pyrites wall, after dipping slightly faster than usual, ran away flat, necessitating the shooting away of a lot of the pyrites. It is now apparently resuming its regular underlie.—No. 1 crosscut north drive No. 3 tunnel. This crosscut has been advanced 2 feet, total 16 feet. The pyrites continue hard.—No. 2 crosscut north drive No. 3 tunnel. The crosscut has been driven 2 feet, total 11 feet; there is no change to report.—South drive No. 3 tunnel. The face has been advanced 9 feet, total 367 feet; some rich copper ore is showing in the drive.—North drive, Indicator winze. 9 feet has been driven, total 23 feet; there is no change.—North drive No. 4 tunnel. The contractors have driven 2 feet, total 169 feet; ground early and hard for breaking.—No. 1 crosscut north drive No. 4 tunnel. The crosscut has been driven 3 feet, total 24 feet; still in hard pyrites.—South drive No. 4 tunnel. The drive has been advanced 9 feet, total 132 feet; there is an improvement here, there being some erubescite showing in the pyrites.—No. 2 winze No. 1 crosscut south drive 50 feet level engine shaft, 4 tunnel. The winze has been sunk 3 feet in good copper ore; the vein of auriferous schist is going down between the pyrites and the country rock, but is very thin.—Engine shaft No. 4 tunnel. The shaft has been sunk 6 feet, total 17 feet below the 100 feet level; the rock continues to bore and break well.—No. 5 tunnel. The contractors have driven 4 feet, total 1036 feet; the rock is hard conglomerate, but is breaking slightly better.—Progress report for week ending June 19: Through tramway completed.—Hanging line. Earthworks ready for cable and plates. Cable roller frames in position, and rails laid for four chains.—Smelter site. Excavation for full length nearing completion. Continuation of Abt siding into smelter site in progress; culvert in position and pile driver being erected.—Converter site. Clearing nearly completed. Brick and sawmill plants running full time. Weather moderately fine.

MOSMAN.—Mining manager's report for fortnight ending June 22:—North Australian: North Bryerley level. Four stopes worked in the reef is 4 inches thick, and in another 6 inches. There is no reef in the other two at present.—South Bryerley level, three stopes. In one the reef is 8 inches thick, in the second 4 inches, of fairly good stone. There is no reef in the third stope at present.—Intermediate level, four stopes. Reef 4 inches to 10 inches thick of fairly good quality.—Paddy shaft. Sunk and timbered 15 feet. Total from surface 175 feet.—Wyndham Mine, 14 level north. Total length 140 feet from shaft. Formation favourable for a reef.—14 level south. Total length 138 feet from shaft. No reef at present.—Eight level south. Reef varies from a few inches to 14 feet, of medium quality.

MILLS' DAY DAWN UNITED.—Mining manager's report for fortnight ending June 15: Underlie shaft: sunk 9 feet, total below 9 level 107 feet. No change in sink.—9 level west, hanging-wall. Total length 260 feet. Reef in drive and leading stope 3 feet, medium quality. Crosscut extended 12 feet, total 24 feet. 3 feet heavy mineral stone in face.—8 level west. The level going west is 111 feet long, with 1 foot of good stone on hanging-wall, and 2 feet similar stone on footwall. The level going east is 34 feet; the reef has improved, and is now 4 feet in the face of fair quality. No. 2 hanging-wall winze, 47 feet deep, with 4 feet fair quality stone. No. 1 footwall winze 60 feet deep. Footwall level, 3 feet, poor quality. Crosscut stope, 18 inches heavy mineral stone.—6A level. Stopes each side of shaft, 6 feet good quality stone.—6 level east. Stopes have 6 feet heavy mineral stone.—6 level west stopes. Reef 5 feet, medium quality.—5 level west. Stopes near boundary. Stone bearing east under cliff stope, 15 inches heavy mineral stone.—Footwall level. For 60 feet reef 6 feet, heavily mineralised. Top of footwall has 2 feet of good quality stone.—5 level east. Winze 50 feet on fair quality stone.—3 level east. Reef on footwall widened out to 18 inches fair stone.

NEW QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers, June 29:—No. 2 south level. Stoping has been carried on over this level, the reef varying from a leader to about 4 inches.—No. 4 south level (footwall). This drive has been extended a further distance of 7 feet, making it 141 feet from the junction of footwall and hanging wall vein. Stoping has been continued under the level and over the level; the reef is irregular from 3 inches to 1 foot.—No. 5A south level. Stoping is being carried on over this level, and the reef at present is much smaller than at the time of last report, not averaging more than 5 inches.—No. 1A underlie north level. This level has been advanced a further 10 feet, making it 255 feet from the underlie shaft, and the reef is about 6 inches.—No. 4 formation.—No. 2 north level. Stoping has been carried on over this level. The reef still continues very small, about 2 inches, and the ground is very hard.—No. 3 north level. No. 3 north level has been extended a further distance of 24 feet, making 93 feet from underlie

shaft. During the last 10 feet a soft formation has come in. It is intermixed with quartz, and is making a lot of water, and indications pointing to a change for the better in this drive. No. 3 south level has been extended a further distance of 10 feet, making it 18 feet from underlie shaft. The ground is very hard, with only a thin vein of quartz.—Straight shaft. Sinking has been resumed this week, and one sink has been taken out of the shaft. Owing to a mishap to one of the compressors we were unable to start last week. It is very difficult to get sufficient air to carry on the sinking and the other workings at the same time, and the appliances are quite inadequate.—Quantity of quartz raised during the fortnight. No. 2 south level 37 trucks, No. 4 south level (footwall) 175 trucks, No. 5a south level 55 trucks, No. 1a underlie north level 43 trucks, no formation 89 trucks, total 399 trucks.—(Signed) W. Henderson.

No. 7 NORTH-EAST QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers June 21: On the 8th inst. I brought in the gold from Hamilton and party's crushing, and also Wherry and party's. The first named crushed 12 tons 3 cwt. for 24 ounces 11 dwts. 21 grains of smelted gold, and Wherry and party from 20 tons 15 cwt. and 13 ounces 14 dwts. 9 grains of smelted gold. I have let a block of ground over No. 3 level east to Jordan and party, they are driving from the rise put up by the company. Brown and party above No. 1 level east are stopping on a reef about 6 inches thick of good quality stone. Northey and party in No. 1 level west are securing the level, preparing to start stopping. Hamilton and party on the eastern side of the shaft above the Dam level have 20 inches to 2 feet of splendid stone right along their stop; in their stop on the western side there is but little stone showing at present. Balch and party below No. 2 level west have a fair face of stone from 10 inches to 1 foot thick. Balch and party crushed 32 tons for 36 ounces 6 grains of smelted gold. They have a foot of stone in the face at present. Tackett and party have very little stone showing at present in their place above No. 3 west. Wherry and party have just the same as last reported on. Perry and party at the back of No. 4 level are getting a little stone, but it is small just now. Williams and party adjoining block to the above have 14 or 15 inches of stone in the face. During the fortnight the old pump has been dismantled and brought to the surface. The dam has been thoroughly cleaned, and the new pump erected in position, but I am sorry to say does not give satisfaction, owing to bad fitting rings and head on the water side. We have had to order a new head adapted for leader buckets, and when this is in position I think the pump will give every satisfaction. Quartz hauled for the fortnight about 19 tons.—(Signed) John T. L. Williams.

OURO PRETO.—Passagem Mine report for June: Incline shaft No. 1 was sunk 1'30 metre. It carries quartz along the south-west end, but the breast is chiefly in quartzite. 505 end north-east was driven 2'70 metres. The quartz has dipped under the level, and the end is now in quartzite. 505 end south-west was driven 2'10 metres. The schist is getting smaller, and the end is nearly full size in quartz. 470 end north-east was driven 3'50 metres. A bar of schist is standing across the middle of the end, but the quartz is extending under the floor of the level. 470 end south-west was driven 2'30 metres in schist carrying only small lines of quartz. 435 end north-east was driven 1'60 metres in schist without ore. Crosscut from 435 stopes was driven 460 metres, and has holed to winze from 400 level. This communication will greatly facilitate transport of attle from higher levels for filling the big excavation at the 435 level. 435 end south-west was driven 3'60 metres in stratified quartzite. 400 end north-east was driven 3'70 metres. It carries a bar of quartzite against the roof, but the rest of the end is in strong lode. 365 end north-east was driven 3'50 metres on a branch of ore 1 metre thick with hard quartzite below. Crosscut from 365 north-east was driven 3'50 metres in very hard quartzite. Rise from 365 north-east was advanced 3 metres. The upper half of the breast is in quartz, but lower part continues in quartzite. 365 end south-west was driven 3'30 metres in schist without ore. End from No. 2 shaft at 365 was driven 1'40 metre, full size, in strong massive quartz. 315 end south-west was driven 7'40 metres in schist, carrying a good deal of water. Quartz is holding along the floor of the level. Rise from 265 south-west was advanced 5 metres, and had latterly got into the ore shoot under 215 level and is now full size in quartz. End at 235 south-west was driven 1'20 metre in schist under the lode and has been temporarily suspended. End from stoppe under 215 is being driven to make a communication for removing pillars under 215 level. It was driven 270 metres, and is full size in quartz, carrying patches of pyrites and tourmaline ore. 215 end south-west was driven 3'20 metres. The lode is not so compact as formerly, and at present carries a good deal of quartzite.—Stopping. The lode in the stopes at the 435 level still continues to be very productive. It averages throughout the four stopes over 5 metres thickness of clean milling ore, and is composed of friable quartz with strings and patches of arsenical pyrites, the average assay being about 20 grammes per ton. At the 400 level the lode north-east of No. 2 shaft is small but very regular, and between the shafts a big body of ore is still holding up under the 365 level, though it is now more mixed with schist than formerly. South-west of No. 1 shaft at this level the stopes in Rise 28 show an improvement. The schist has cut out, and the lode carries about 4 metres thickness of good quality ore. At the 365 level the stopes near south-west end are going up on lode 2 metres thick, composed of quartz with patches of pyrites and tourmaline ore. On the north-east side the stoppe carries quartz about 4 metres thick, but though of good appearance and carrying occasional patches of pyrites, it is rather low grade. At the 315 south-west the lode in stoppe near end still preserves its size, there being about 5 metres thickness of quartz, carrying good patches of tourmaline. Near rise 30 the lode is smaller, averaging not more than 2 metres, but it is holding up very regularly. At another stoppe over the level the limit of the ore shoot has been reached, and the face being nearly all in quartzite it has been suspended. North-east at the 315 level the ore on the Borraco Secco shoot is still holding forward under the level, and it is being stoped up previous to building. The stoppe carries a face 4 metres high of solid quartz with good patches of pyritic ore throughout. Over the 265 level the lode in stopes is of considerable thickness, but it carries a good deal of schist. At the 215 north-east a new stoppe has been started from the level and is opening up well, the lode being 4 metres thick, most of which is fair quality milling ore.—Henry J. Gifford.

ROBINSON GOLD.—The directors submit the general manager's summary of operations of the company for June as follows:—Mine. Quartz mined, 8992 tons.—Development. Drives, 637 feet; raises, 322 feet; crosscuts, 85 feet; total, 1044 feet.—Main incline shaft (west). Fifth level. Driving east and west on main reef, 54 feet. Crosscut, 7 feet.—Sixth level. Driving west on main reef, 40 feet. Driving east and west on south reef, 59 feet. Raise, 8 feet. Crosscut, 7 feet.—Seventh level. Driving west on main reef, 37 feet. Driving west on south reef, 35 feet. Raise, 32 feet. Crosscut, 13 feet.—Eighth level. Driving west on south reef, 38 feet. Raise, 38 feet.—Ninth level. Raise, 40 feet. Crosscut, 32 feet.—Tenth level. Driving east on main reef, 36 feet. Raises, 66 feet.—Main incline shaft (east). Fifth level. Driving east on main reef, 26 feet. Raise, 5 feet.—Sixth level. Driving west on main reef, 12 feet. Driving west on south reef, 23 feet. Crosscut, 26 feet.—Seventh level. Driving east and west on reef, 76 feet. Driving west on south reef, 19 feet. Raises, 24 feet.—Ninth level. Driving west on main reef, 12 feet. Raise, 39 feet.—Tenth level. Driving west on main reef, 40 feet. Raises, 51 feet. Total, 1044 feet.—Mill. Stamps at work, 70; net running time, 28 days; tons crushed, 8992 tons; tons per stamp per diem, 4.6 tons; gold won from above, 9899 ounces 10 dwts.—Chlorination and cyanide works. Gold won from own concentrates (by chlorination), 1810 ounces; bullion from tailings (cyanide process), 1371 ounces 7 dwts.; from own ore, 12,680 ounces 17 dwts.; gold from concentrates purchased (by chlorination), 2020 ounces 7 dwts.; total, 14,601 ounces 4 dwts. Profit for month, £31,640 0s. 7d. In consequence of an accident to the engine, the mill was shut down for nearly two days. The sum of £11,548 0s. 8d. was expended on account of mill extension during the month. Dividend No. 10, 6 per cent. (6s. per share) was declared on June 24th, and will be paid on receipt of European transfers.

MOUNT ZEEHAN (Tasmania).—Manager reports for week ending June 25:—Silver Queen section. No. 8 lode main shaft sunk 4 feet, total below No. 1 level 34 feet. No. 1 level north extended by tributaries 6 feet 6 inches, total from No. 2 crosscut 6 feet. The lode is still carrying good first-class ore, particularly so in the bottom of drive, where it is fully 1 foot wide, of clean ore. We are now about 57 feet on this rich shoot, with every appearance of it continuing.—Queen Extended section east. Tributaries sold ore realising £101, and yesterday they sampled 8 tons 12 cwt. assaying 1284 ounces of silver per ton, which goes to prove there is very rich ore in this part of your property. G. tributaries sampled 6 tons 11 cwt. of ore, which realised £104, or at the rate of £16 per ton. Their lode still looks well, and to date 120 feet have been driven on this fine body of first-class ore.

PAHANG KABANG.—Sungei Lembing, June 6: I have the pleasure in submitting to you the following report for the month of May:—Myah lode. Myah new adit was advanced 45 feet west on the lode, total 377 feet. Average width of the lode for the month 3 feet 6 inches, still carrying some of the soft blue killas or schist, which I found is not a good sign for tin in this lode. Although I saw some good stones of tin in the pile of stuff that came out during the month, and as no assay was made for the month, I cannot say the value of the lode. No. 1 above adit has been extended 12 feet, total 69 feet. The lode average, 1 foot 6 inches, is not looking so good as the month before.—Brand's. Brand's new adit was driven 16 feet, total 177 feet. As I mentioned in my last report we were off the lode here. Early in the month I put the men to crosscut north to find out which side of the drive the lode was; they have driven north 22 feet, total 22 feet, and as there was no sign of the lode the men were put to drive south and have driven 10 feet. When the crosscut was in 5 to 6 feet, they cut through a lode formation 6 to 8 inches wide running east and west (same as the lode in the first part of the drive) and dipping south. The drive south will be driven a little further, to be sure whether this is the lode, and if nothing like a lode be come across the men will be put to drive west on the lode formation. As the lode is of a fair size the other side of the hill, I hope that the lode here will open up better as the drive enters the hill; this drive will soon have over 300 feet of backs, or 220 feet below top brands. Top brands No. 2 crosscut south was advanced 21 feet, total 30 feet, in search of the lode, and as there was no sign of the lode the men were put to drive on a lode formation in No. 1 crosscut south (this was driven in Mr. McKinsey's time). This is driven 10 feet on the lode east; the lode is 4 feet wide with a good hanging wall and of good appearance.—David W. Jones.

BRITISH GUIANA'S GOLD INDUSTRY.

The gold entered at the Custom House, Georgetown, on the 11th ult. for shipment per the R.M.S. *Solent*, which sailed the same afternoon, amounted to 3522 ounces 1 dwts. 9 grains, to the value of \$62,487.11, as compared with the previous shipment of 4499 ounces 6 dwts. 17 grains, to the value of \$80,066.65. With this addition the total output for the year amounts to 59,943 ounces 3 dwts. 3 grains to the value of \$1,061,823.18. The following are the shippers and the amounts of their shipments:—

	Ounces	dwt.	grains	Total value.
The Colonial Bank ...	1005	6	9	
The B.G. Bank ...	2516	15	0	

Total ... 3522 1 9 \$62,487.11
The following are the returns of gold entered at the office of the Department of Mines for the weeks ending:—

	Ounces	dwt.	grains		Ounces	dwt.	grains
Barama ...	54	12	16	.....	125	8	1
Barima ...	524	1	0	.....	406	7	16
Cayuni ...	257	12	7	.....	172	4	2
Essequibo ...	350	3	2	.....	550	8	6
Groete Creek ...	—	—	—	.....	11	14	5
Mazaruni ...	—	—	—	.....	2	9	23
Potaro ...	459	1	19	.....	422	2	22
Paruni ...	120	17	9	.....	22	15	11
Totals ...	1766	8	5	.....	1713	10	13

Export of Gold from January 1 to July 22.

	Ounces	dwt.	grains	
1895	59,943	6	18	\$1,061,823.18
1894	61,969	16	9	\$1,106,334.13

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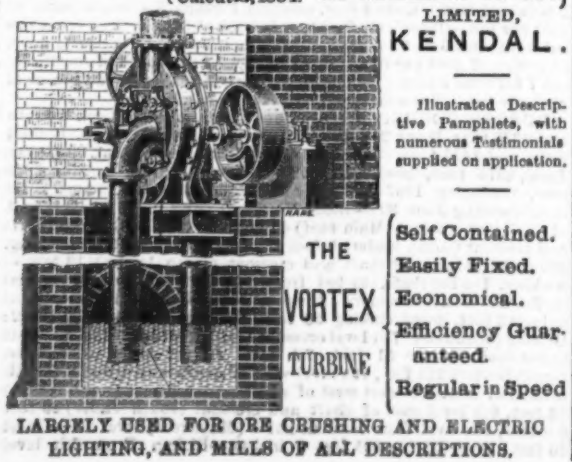
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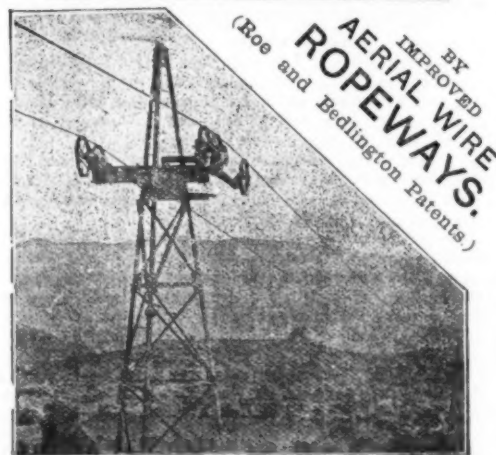
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In respect of which mining leases have been applied for by the vendors. (7) The benefit of an agreement to grant the sole license to use in the colony of New South Wales the electrolytic process of Messrs. Siemens Brothers and Co. (Limited) for the production of metallic zinc, patents for which are to be obtained in such colony by Messrs. Siemens Brothers. (8) The benefits of certain agreements as to the supplies of coal and magnesite, and of an option to lease the Ocean Steam Collieries, New South Wales.

"The question how to successfully treat sulphide ores, which are found in such enormous quantities not only in the mines of Broken Hill, but in many other mining districts in the Australian colonies, has for a long time past occupied the attention of the most prominent metallurgists of the day. Mr. T. B. Jacquet, Government Geological Surveyor, of New South Wales, in his report to the Government, states:—'The most vital question bearing on the future of the silver mining industry at Broken Hill is the success that will attend the attempts to profitably treat the sulphide ores.'

"In order to obtain the highest opinion as to the proper methods to be adopted in the treatment of these sulphide ores, the Barrier Ranges Mining Company's Association of Broken Hill instructed Dr. Schnabel, Royal Counsellor of the Prussian Mining Department, to advise as to the best mode of treatment, and in his report to such association, dated the 15th day of March, 1892, he recommended, after full consideration of all the known methods for the treatment of sulphide ores, those processes which consisted primarily in roasting the sulphide ore, and the subsequent extraction of the zinc contents by means of sulphurous or sulphuric acid, the ore being thus freed from the zinc being subsequently smelted in a blast furnace and bullion produced therefrom. (See Government report, New South Wales, 1894, Department of Mines and Agriculture, page 98.) Before the directors consented to issue the prospectus the whole scheme and the necessary papers relating thereto were placed before Mr. John Howell, late general manager of the Broken Hill Proprietary Company, and Mr. Mactear, F.R.S., Edinburgh, vice-President Institution of Mining and Metallurgy, and Fellow of the Institute of Chemistry, with instructions for them to thoroughly investigate the various processes, and to carry out the necessary experiments so as to satisfy themselves whether the methods proposed to be adopted would be successful.

"Arrangements have been made with Mr. John Howell to act as the managing director of this company in Australia, an appointment which the directors consider will be of the utmost value to the company, seeing that he has been the general manager of the Broken Hill Proprietary Company for several years past, where he has had the charge of one of the largest metallurgical works in the world with marked success, as this company has, during the past five years, paid over £4,000,000 in dividends. The proposed works, which will be erected under the personal supervision of Mr. John Howell, and in accordance with his plans and specifications, will be general ore reduction works, but designed more especially for the treatment of the sulphide ores of the Broken Hill Silver Mine. The works will be located on a site having a frontage to Lake Illawarra, 55 miles south of the City of Sydney, in the centre of the great southern coal field, close to the Government railway line, and within easy access of practically inexhaustible supplies of fuel and fluxes. As regards this site, Mr. Mactear in his report states as follows, viz:—

"As the treatment of 1 ton requires fully 3 tons of fuel, the carrying of the ore to the fuel is clearly the proper course to be adopted, and the convenience of the ground at Lake Illawarra, and cheapness of the fuel gives great advantages over any attempt to treat the ores elsewhere."

"The ores will first be roasted, and the zinc contained therein be leached out with dilute sulphuric acid, and the ores thus freed from zinc, can then be easily smelted in the usual manner, and the silver and the lead recovered."

"It is proposed to erect works capable of treating 200,000 tons of ore per annum, and it is anticipated that the principal source of revenue will be derived from the treatment of sulphide ores from the Broken Hill Mines. Mr. John Howell shows, in his report as to profits, that £1 12s. 2d. per ton net profit on these ores should be obtained by the company, after allowing a net profit to the mineowner of 20s. per ton. The vendors, the Camden Syndicate (Limited), have fixed the purchase price for all the rights and properties above mentioned at the sum of £300,000, payable as follows:—£50,000 in cash, or partly in cash and partly in fully-paid shares, at the option of the directors, and £250,000 in fully-paid shares. All costs and charges incidental to the formation of the company and the issue of shares up to allotment will be borne by the vendors."—[ADVT.]

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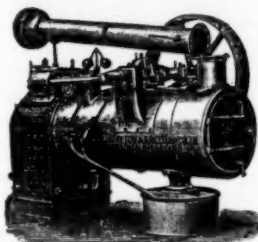
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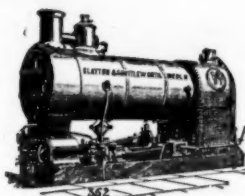
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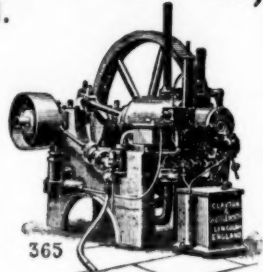
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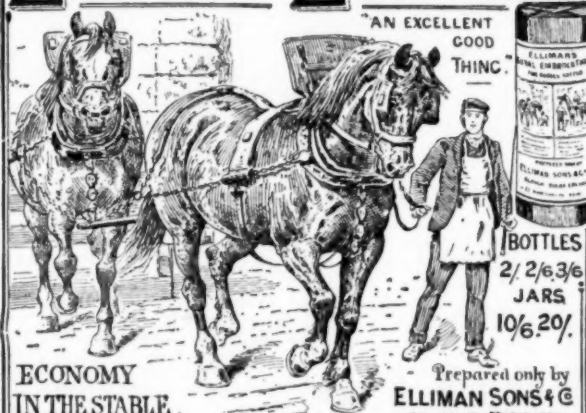
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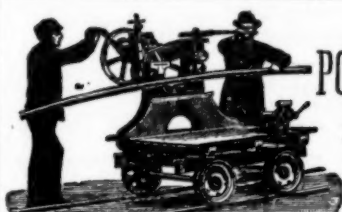
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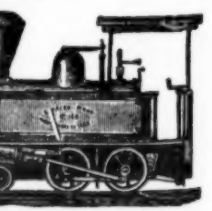
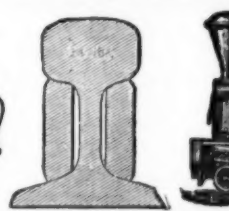
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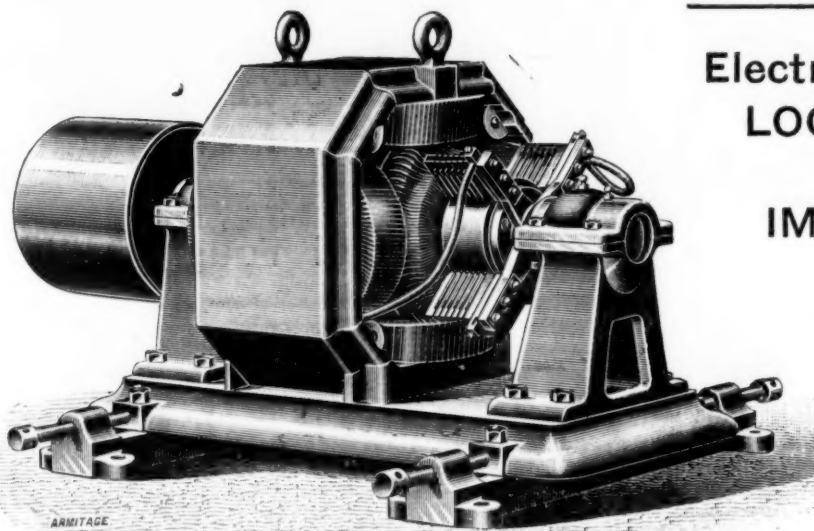
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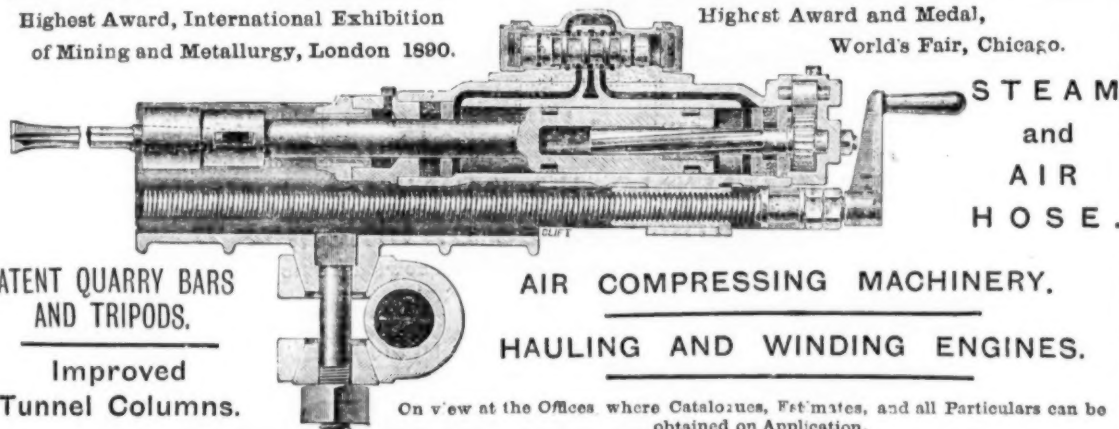
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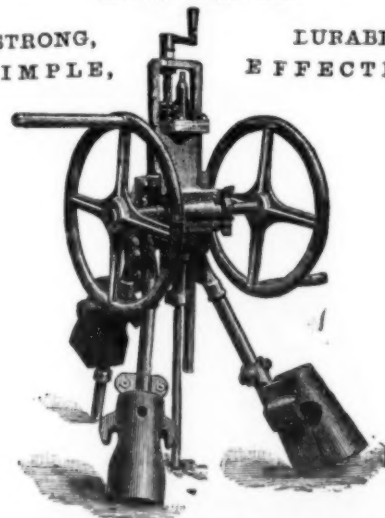
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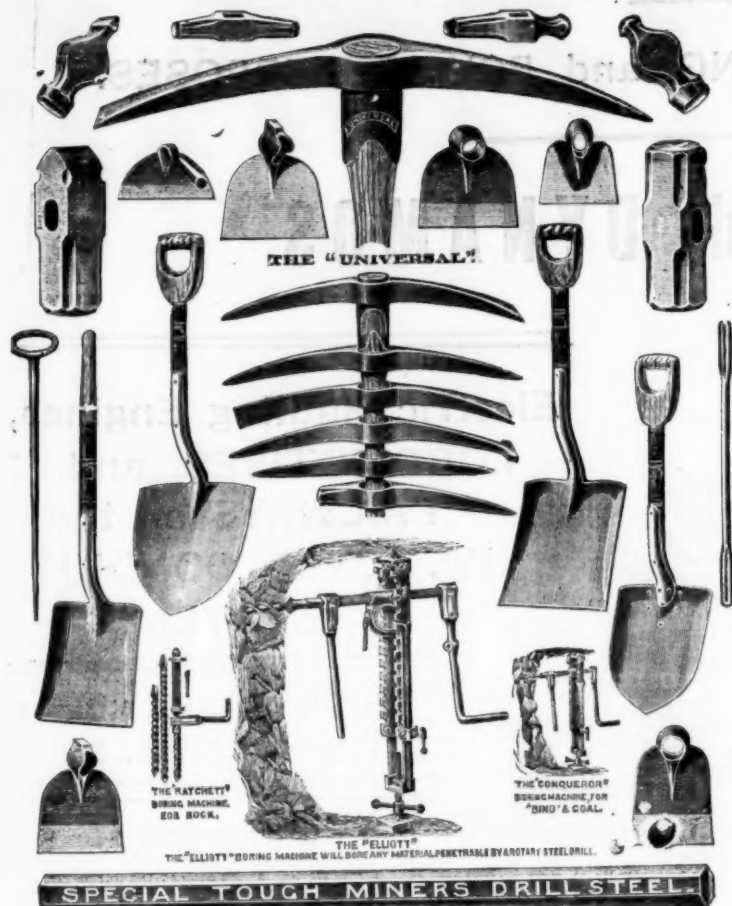
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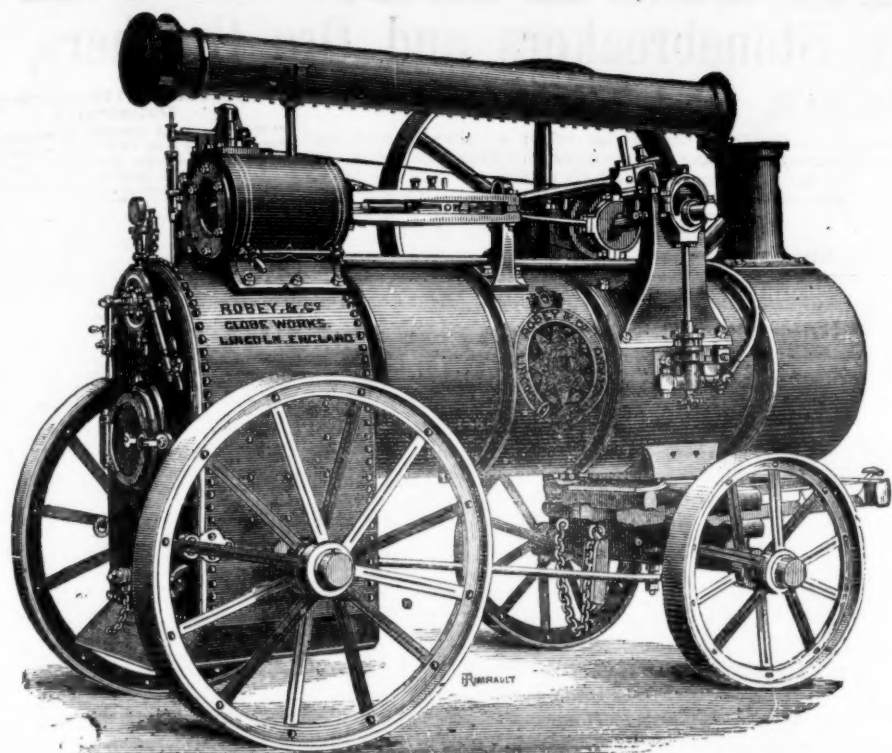
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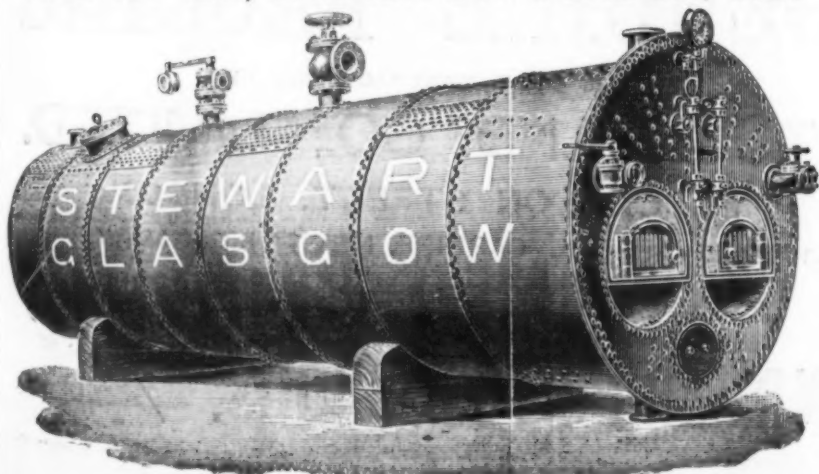
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"Our experience is that the motion and mechanical arrangements of your machine are the best for pulverizing that we have ever met with."

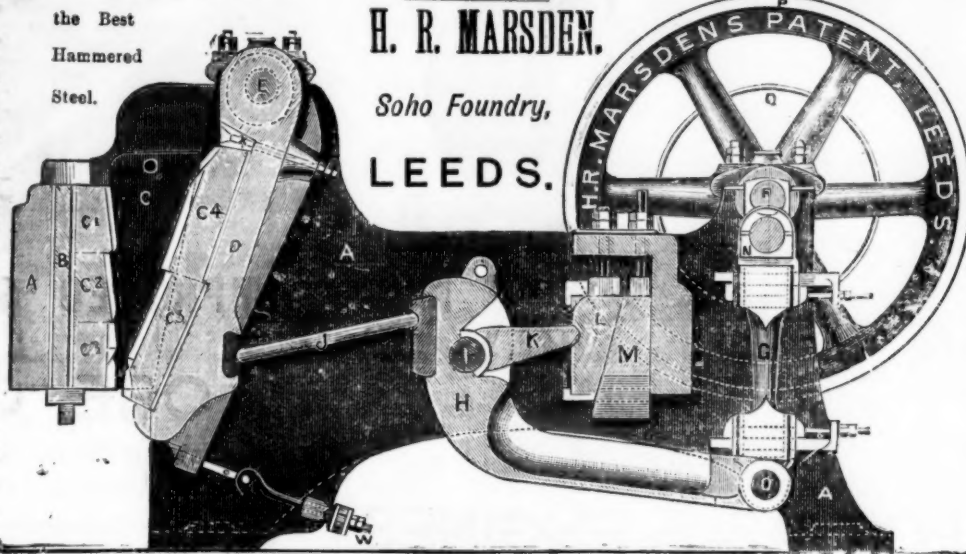
"The reports from our mines regarding the working of your Fine Crusher (20x5) recently supplied are very favourable, although we cannot quote you exact figures. On being got into position it was tried (5 tons), with the result that it made short work of the biggest pieces of ore we put into the hopper. You might say how long you would take to deliver another of the same size."

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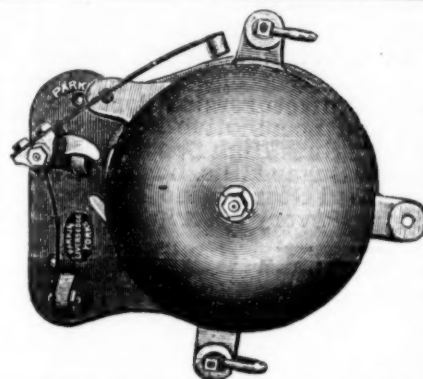
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